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LECTURES

ON

MEDICAL JURISPRUDENCE,

NOW IN COURSE OF DELIVERY,

AT THE

UNIVERSITY OF LONDON.

BY PROFESSOR A. T. THOMSON.

LECTURE XLII.

THE SALTS OF LEAD:—*The carbonate of lead the only salt of lead that is directly poisonous. Action of water on lead. Resulting poison. Cause of the prevention of water from being rendered poisonous, when kept in leaden cisterns. Poisoning of water from passing through leaden pipes. Poisonous rum. Sweetening of sour wine with litharge. The acetate of lead itself not a poisonous medicine. Poisonous effect of rum toddy and soda powders. Mode of prescribing the acetate of lead. Dogs not poisonable with any of the salts of leads. Experiments on rabbits to prove the poisonous quality of carbonate, the deleterious effect of the diacetate, and the innocuous character of the other salts, of lead. Relative affinity of salts of lead for carbonic acid. Pathological action of the carbonate. Symptoms of poisoning with lead—Case; peculiar convulsions. Post-mortem appearances in death from poisoning with salts of lead. Chemical evidence and tests. Treatment to save life. Colica pictonum. Vessels formed with alloys of other metal with lead.*

GENTLEMEN:—I have now to bring under your notice the poisonous influence of the salts of lead.

Metallic lead is not poisonous; but the conjunction of the metal with oxygen, and with some acids, is stated to produce poisonous compounds. I have, however, advanced an opinion, which I am ready to maintain, that the only salt of lead which is *directly* poisonous, is the carbonate of lead. I trust, Gentlemen, that you will excuse me, therefore, if I enter a little in to the details which I presume to think support this opinion.

In the first place, it is not difficult to prove that, in every recorded case of poisoning by the salts of lead, the *carbonate* has been the poisoning agent:—in the second place, it is equally easy to demonstrate that it is those salts of lead only which are readily convertible into the *carbonate*, which are poisonous:—in the third place, whatever prevents this conversion, prevents the poisonous influence of the salts of lead.

1. Porters and labourers employed in loading carts with pig lead, and compositors in printing offices, are occasionally attacked with colica pictonum, and more frequently with paralysis of the hands. Now, in these cases, the poisonous agent is carbonate of lead, which, in both instances, is observed to be formed as an efflorescence on the surface of the lead and the types; and as the persons handling them are not always very strict in washing their hands before taking food, the carbonate finds its way into the stomach.

Plumbers suffer from the same cause; and smelters of lead are still more liable to colic and paralysis, owing to the melted lead being partially oxidized, and the oxide being volatilized, and taken into the lungs, in a form readily convertible into carbonate of lead. This facility of the conversion of the protoxide of lead into the carbonate, is demonstrated by the fact, that litharge, which is made by passing heated air over the melted metal, in the process of cupellation, and is blown off as it is oxidized, contains four per cent of carbonate of lead.

The instances of the carbonate itself having proved poisonous, are extremely numerous. Among painters who employ it, those who are not cleanly in their persons are the principal victims. Formerly, workmen in white lead manufactories were equally liable to lead colic and paralysis: but since the improvements in the process, and owing to no dust being produced, as the white lead is now ground in water, fewer of this description of workmen suffer than was formerly the case.

Rain water, collected and preserved in leaden cisterns; distilled water, preserved in the same manner; and river water, such as Thames water, carried to sea in leaden cisterns, and, consequently, submitted to agitation, all become poisonous.

The first of these facts was known to the ancients, and is mentioned by VITRUVIUS, who says, that the result of the action of rain water on the lead is cerussa, which, I need not inform you, is carbonate of lead. GALEN, also, cautions us against the use of white lead.

That this carbonate is also the result of the action of distilled water on metallic lead, was strikingly demonstrated in the laboratory of the *Faculty of Medicine* of Paris. One thousand pounds of distilled water, which were kept for two months in a leaden pneumatic trough, when evaporated, yielded two ounces of carbonate of lead. The lids, also, of the common leaden cisterns employed for preserving water in this metropolis and other places, soon become incrusted with a coating of carbonate of lead formed by the combined action of the air and the vapour of the water on the lead; for this metal, when it is completely immersed in distilled water, is not affected by it.

Dr. CHRISTISON, who has carefully examined this subject, has ascertained, that the reason why the water kept in the leaden cisterns so generally employed is not poisonous, is owing to the formation of a coating on the leaden cistern, by the salts contained in the water forming insoluble compounds with the oxide of lead. This crust, or coating, prevents the farther action of the water on the lead.

From the same reason, water collected from the roofs of houses newly covered with lead, proves poisonous; but that which is collected from old roofs is not poisonous: the former contains carbonate of lead, the result of the combined action of the water and the air on the fresh lead; but the latter contains no carbonate, owing to the lead and the spouts being crusted over, and thus protected from the action of the air and the water.

Water is conveyed through leaden pipes with impunity, when these are not so large as to admit air to mingle with the stream of water, and when the water does not contain much carbonic acid. When much of that acid is present, the pipes are rapidly corroded, and carbonate of lead is formed. In the city of Boston, in America, the water is greatly charged with carbonic acid; both pipes and suction pumps, when made of lead, are soon corroded, and numerous cases of colica pictonum occur. A spring which supplied Lord ASHBURNHAM's house in Sussex, and the water of which was conveyed through leaden pipes, caused colic in his family, and even proved fatal to some of his servants. On examination of the water, it was found to be charged with carbonic acid.

Milk, if left to cream in leaden vessels, becomes poisonous. A farmer's daughter used to wipe with her fingers the edges of the leaden vessels in which the cream was kept, and then to lick her fingers: she was attacked with colica pictonum. I have ascertained that it is the carbonate of lead which is formed in this case.

Rum, in the West Indies, is often distilled through leaden worms, and thence it occasionally causes colica pictonum. Dr. J. HUNTER mentions this as the principal source of the dry bellyach which our troops suffered in the West Indies, in 1781. Dr. SHEARMAN mentions the effects of a cask of Hollands which was mixed with sugar of lead, in producing colica pictonum on a whole district. It is worthy of remark that, in this instance, the adults suffered more than young individuals, a fact which can be easily explained, by the less liability of the acetate to be changed into the carbonate in the stomachs of the young, owing to the greater acescency of their stomachs than those of adults.

Sour wines are frequently rendered drinkable by the addition of litharge, a custom common in Paris, and some other towns in France; and there can be no doubt that wine which is permitted to stand long upon litharge, acts upon the oxide; and the sweetness which it communicates, and which covers the acidity of the wine, is owing to the formation of the citrate, the malate, and the tartrate of lead, all of which are readily converted into the carbonate; and as this change takes place in the alimentary canal, the wine becomes poisonous. Devonshire cyder, formerly, owing to the employment of leaden coolers, often proved poisonous; hence the term *Devonshire colic* is synonimous with colica pictonum.

In the "Medical Essays" of Dr. PERCIVAL, and in many other publications, the acetate and diacetate of lead are said to operate as poisons, in the same manner as the carbonate: but experience and observation have convinced me that this only occurs when circumstances exist calculated to convert them into the carbonate. The former salt, the acetate of lead, was introduced, as an internal remedy, in the treatment of hæmorrhages, by PARACELSUS; and it has been, since his time, very generally employed as a sedative in the same class of diseases, and, also, in phthisis; yet it has rarely caused colica pictonum; and when that has occurred, it might be traced to the formation of the carbonate. I have given two scruples of the acetate daily, in hæmoptysis, for twelve successive days; and instances are on record, in which ʒvj. of the acetate have been accidentally swallowed, without any injurious consequences.

The diacetate, however, cannot be taken with the same impunity. I once witnessed an instance of violent colic, followed by paralysis and death, from the accidental internal administration of GOULARD's extract, which is, as you know, a solution of the diacetate. There are several recorded cases of the same kind, but, in all of these, I shall have no difficulty of convincing you that the carbonate of lead was formed.

Dr. PERCIVAL mentions that the workmen in the sugar-house, at Manchester, when they were supplied with beer prepared from malt and the refuse of the sugar, fermented together in a large leaden cistern, were liable to severe attacks of colic; but that when proper measures were taken to check the progress of the fermentation, the sugar boilers were less liable to these attacks. In this case the fermentation formed the carbonate.

A gentleman who resided in the island of Grenada, returned to England, labouring under paralysis of both the upper and lower extremities; the consequence of colica pictonum (or dry bellyach, as the disease is termed in the West Indies). He consulted me respecting his disease, and I happily succeeded in restoring to him the free use of his limbs. He returned shortly afterwards to Grenada, but was obliged, in less than eighteen months, to revisit England, from another attack of the disease. Consulting me a second time, he stated that he was inclined to attribute his complaint to toddy made with rum which, in the process of distillation, had passed through a leaden pipe, in the refrigeratory. One fact seemed to render this opinion doubtful: many other persons had drunk of the same rum in toddy, yet had not suffered either from colic or from paralysis. On making strict inquiry, however, into all the habits of my patient, I discovered that he had, on both occasions, taken soda powders with his toddy, a short time before the disease commenced.

These facts, and a remark of Dr. LATHAM, sen., in a paper on the use of acetate of lead in phthisis, published in the 5th vol. of the "Transactions of the College of Physians," of London, hinting that the increased quantity of acid contained in the acetate, is the cause of its being innocuous, as he himself had ascertained, confirmed my opinions, and determined me, in using the acetate of lead, always to prescribe it in conjunction with distilled vinegar. Since I adopted this plan of prescribing the acetate, although it has been taken in several instances to the extent of eight and ten grains three times a day, without opium, for ten and twelve successive days, yet, with one exception, no colic, nor any other deleterious effects, has resulted from its employment.

These facts were sufficient to satisfy my own mind, that my theory was tenable. Direct experiments on the deleterious influence of the carbonate compared with that of the other salts of lead, were, however, necessary to satisfy others of the profession and the public, and to induce them to adopt an opinion so opposite to that which has been, and still is, generally maintained. My first object was to ascertain which of the salts of lead are most poisonous.

Eight experiments were made upon dogs, with both the *carbonate* and *acetate of lead*; without any satisfactory results. I found that dogs resist the internal administration of all the salts of lead; most probably owing to the phosphates contained in their stomachs.

Acetate of lead injected into the veins of a dog kills it; but, on dissection, no diseased appearances are detected: the animal, when it survives the operation, dies of a nervous affection; it becomes languid; staggers; the respiration becomes convulsive, and it dies comatose. Applied to wounds, acetate of lead paralyses, and also kills; and symptoms of increased vascular action are found in the stomach, a circumstance not easily accounted for. When injected into the rectum, it causes purging, tenesmus, itching of the anus, and great debility. When introduced into the trachea, it brings on regular colica pictonum:—this can be easily explained by the quantity of carbonic acid which it meets with there. It is also true that paralysis has followed the application of both acetate and diacetate of lead, in poultices applied to ulcers in man: but, in all these cases, the carbonate is formed by the exposure of the acetate, dissolved in the pus, as well as by the process of fermentation, which is soon set up in poultices; and no instances of the kind have occurred when the poultices have contained vinegar.

Having ascertained that dogs were useless for my experiments, rabbits were next selected as the subjects of the following series of experiments:—

Experiment 1. Six grains of nitrate of lead dissolved in one fluid drachm of distilled water, were injected into the stomach of a healthy, strong rabbit. The animal was much agitated by the operation, but an hour afterwards appeared quite well, and continued so until the next day, when nine grains of the nitrate dissolved in the same quantity of water, were again injected into the stomach. No inconvenience followed from this augmented dose.

Experiment 2. Three days afterwards six grains of the carbonate of lead, rubbed with a fluid drachm of mucilage of starch, were injected into the stomach of the same rabbit. The animal seemed little incommoded for two hours; on the following morning it was found dead. On opening the body the only peculiarity which could be perceived was the turgid state of all the cavi-

ties of the heart. The blood was slightly coagulated in the right auricle, and was discovered to be fluid in the other three cavities; it was not of the bright rose colour which was the result of the injection of the acetate into the jugular vein.

Experiment 3. Six grains of hydrochlorate of lead, rubbed up with a fluid drachm of mucilage of starch, were injected into the stomach of a strong, young rabbit: no inconvenience resulted to the animal.

Experiment 4. Three days afterwards six grains of the carbonate of lead were injected into the stomach of the same rabbit; on the following morning the animal appeared dull and uncomfortable, but he survived until the morning of the second day, and then died. On the dissection of the body the heart was found in the same state as in the rabbit which was destroyed in the second experiment. Two other rabbits were treated exactly in the same manner, with a fluid drachm of the concentrated solutions of the acetate, and of the diacetate, each containing seven grains of the salts. The solution of the acetate produced no inconvenience whatsoever, but the administration of that of the diacetate was followed by symptoms of dejection and languor, with disinclination to move and to take food: the animal, however, was alive at the termination of a week after the administration of the salt, when it was at length killed by four grains of the carbonate.

From these experiments, which were witnessed and verified by my late learned colleague, and much lamented friend, Professor TURNER, I conceive that I am authorized to conclude,—

1. That the *carbonate of lead* proves fatal to rabbits, by operating slowly on the nervous energy, and by at length suddenly arresting the action of the heart.

2. That the *diacetate* of lead appears to have some tendency to act on these animals in a similar manner.

3. That the *nitrate* and the *hydrochlorate* of lead produce no effect on these animals.

If I may be permitted to draw an analogy between these effects, and those which are observed in man, during the medicinal use, or from the accidental introduction into his system, of the salts of lead, I should venture to infer, that in moderate doses they act on the human species nearly in the same manner as on rabbits.

In rabbits we find that the sedative influence of the carbonate is sufficient to destroy life; also, that one of the salts, the diacetate, having a great affinity for carbonic acid, approaches nearest in its effects to the carbonate; and that those salts which have little or no affinity for carbonic acid, exert little or no influence on the animal economy, except as local irritants, when they are administered in very large doses.

The relative affinity of the most frequently employed salts of lead for carbonic acid is easily demonstrated, by exposing an equal weight of diacetate, acetate, and acidulated acetate of lead, dissolved in equal quantities of distilled water. The solution of the diacetate will become white and turbid in a few minutes; that of the acetate not for many hours, and that of the acidulated acetate not after many weeks have elapsed. In the two former the turbidity arises from the formation of carbonate of lead.

On a review of the whole of the foregoing facts, I think we arrive at this conclusion, that there is only one *direct* poison among the salts of lead, namely, the carbonate; and, that when the other salts of lead display poisonous effects, these are to be attributed either wholly, or in part, to their conversion into the carbonate. This salt operates as a powerful astringent sedative on the living system, diminishing the nervous energy, and, consequently, greatly depressing the powers of the circulation, and lowering the tone of the muscular organs. It is probably taken into the blood, which may account for its slow operation when it is introduced into the stomach in minute doses, for a considerable length of time; and, also, for its producing similar effects, when applied to the surface of the body denuded of the cuticle, or in a state of ulceration. That it operates, however, on the nervous system, both locally and generally, independently of absorption, is probable.

Regarding the salts of lead generally, and preserving the above mentioned facts in view, the following are the symptoms of poisoning by them. The symptoms never come on suddenly, unless when very large doses of the diacetate have been swallowed, in which case the impression is that of a simple irritant poison, exciting inflammation of the mucous membrane. When colica pictonum displays its approach, there is at first loss of appetite, nausea, increased discharge of saliva, and restless nights. As the nervous symptoms increase, vomiting supervenes: the patient rejects every thing he takes; and, at the same time, much bile and secreted fluids are thrown up: to this succeed pains of the abdomen, at first returning only at long intervals, which shorten as the disease proceeds. The pain is most severe around the umbilicus, and less at the epigastrium and the hypochondrium. Sometimes the loins are affected with pain, and the sides also, above the crest of the ilium: it is most severe at night, but it is not augmented by pressure. These pains are accompanied by headach, pains of the limbs, the insides of the thighs, the knees, the calves of the legs, the ankles, and the soles of the feet. Notwithstanding

these pains, there is no fever, and the pulse is often below 60 in the minute. A striking symptom is the drawing in of the abdomen: it is accompanied with great constipation, and dry and lumpy fæces. There is much prostration of strength, and an expression of the greatest anxiety. Such may be regarded as the first stage of the attack, or series of symptoms. The second stage is ushered in by peritoneal inflammation; there is tenderness of the abdomen, fever, a hard pulse, and, occasionally, but rarely, disturbance of the cerebral functions. Paralysis now succeeds to these symptoms; but the paralysis sometimes occurs without any febrile or inflammatory action being obvious.

In some instances, especially in silverers of mirrors, in which an alloy of lead and mercury is employed, a curious modification of symptoms is displayed. Instead of paralysis, convulsive motions of the body supervene, the effort of volition is rarely obeyed, and great agitations, resembling chorea, present themselves.

"George Stevens, coach painter and varnisher, aged thirty-three, of middle stature, and formerly of muscular habit, applied to become an out-patient of the Hampshire county hospital, on the 11th of October, 1808. The friends who brought him report that, seven months ago, he was seized with a fever, which confined him to his bed for some time, but as he had then no medical attendant, no particulars of his case can be learned, except that his fever was succeeded by great weakness, and wandering spasmodic pains of the abdomen, and especially about the umbilical region. These pains continued, with occasional intermissions, until his admission to the hospital. He is now affected with spasmodic pains, or convulsive motions of the body. Any voluntary effort to move his limbs, or even to speak, excites a great agitation of his frame; and the effort of volition is rarely obeyed, except, as it were, by accident, in the general struggle occasioned by his mental emotion. The movements of his limbs are so uncertain, that he can neither stand nor walk alone, and when seated in a chair he sometimes remains still for a few minutes, then starts up in a rigid posture, which is succeeded by a general tremor, and often terminates in a flood of tears. He sometimes talks calmly and rationally, and at other times he appears bewildered, his countenance manifests great anxiety, and his words and actions are perfectly incoherent and unintelligible. He complains of violent pains in the occiput, frequent spasms of colic, and considerable distress in the lumbar and umbilical regions. His bowels are much constipated, hard, and distended, and he frequently has passed nine or ten days without evacuation. His urine is sparing and high-coloured; tongue very foul; pulse rapid and irregular. His flesh is greatly reduced, and he is averse from all food."* In this case the attack was cured by bringing the system of the patient under the influence of mercury.

It is not easy to say how much of these symptoms were due to the mercury, or how far the mixed metals are more susceptible of change in the intestinal canal than when either the one or the other is taken into the stomach alone. It is evident that the influence of the poison is exerted on the nervous system. From the pains attending colica pictonum, it has, however, been doubted whether the action of the salts of lead can be regarded as strictly sedative; and it is a curious fact, that the sensitive nerves remain as susceptible of impression as at any time. On this account I have not classed them as sedative poisons.

Post-mortem examination.—In eighty cases examined by Laennec, no appearances indicative of diseased action could be discovered. The muscles generally appeared blanched and shrunk, the intestines pale and almost exsanguine.

In the case of a French drummer, who was killed by drinking a quantity of a solution of diacetate of lead, inflammation appeared to have existed in the lower end of the gullet, in the stomach, the duodenum, part of the jejunum, and part of the colon; and in some other cases marks of inflammatory action have also been evident; but in the greater number of instances this does not occur; the only morbid appearance is contraction of the larger intestines. Sometimes, however, they are much dilated, and if the poison of lead destroys tone, and, as we know, causes paralysis, it is more easy to account for this distention than for the contracted state of the canal. No traces of lead have been found in any case in the stomach or the intestines. All the salts of lead which are soluble, and the carbonate, produce the same appearances when death follows their administration. But it is of some importance to know which has been the poisoning agent.

Chemical examination.

Litharge is not likely to be taken in its usual form, but it has been, and is still, employed, as already stated, to sweeten sour wines. If poisoning occur from this cause, and the litharge is found, it may be readily recognized, but in legal inquiries this evidence is not sufficient. For more satisfactory evidence, therefore, pulverize the substance, diffuse it in water, and add solution of sulphuretted hydrogen gas: if it be litharge there will be a black precipitate. But the oxides of mercury, which are also red, produce the same effect. To ascertain that

* Edin. Med. & Surg. Jour., vol. ix., p. 62.

litharge, therefore, is the substance, mix the precipitate with a little oil and charcoal, and reduce it by the flame of a lamp, urged by the blow-pipe. If the poison be litharge a globule of metallic lead will be obtained.

If the litharge have been employed to sweeten sour wine, and poisonous effects have resulted, the suspicions excited may be verified by passing through the wine a current of sulphuretted hydrogen gas; then boiling the fluid, and collecting the precipitate: if it be small in quantity, treat it with hydrochloric acid; and, having filtered, and diluted the solution with water, test it as if it were a solution of the acetate. If the quantity be large, divide it into two parts; reduce one by the blow-pipe, and treat the other with hydrochloric acid.

If the poison be *acetate of lead*, it is known by its white, sweet-tasted crystals, which exhale an odour of acetic acid when sulphuric acid is poured over them; and by the following re-agents, when the salt is dissolved in water, or when it has been administered in solution.

1. Solution of hydriodate of potassa throws down the yellow iodide of lead, if the solution contain one part of the acetate in 10.000 of water. It is essential to recollect, in using this test, that acetic acid causes a yellow colour in a concentrated solution when no salt of lead is present, but no precipitate is thrown down.

2. Solution of ferrocyanate of potassa forms a white precipitate, if the solution contain one part of the acetate in 18.000 of water.

3. Solution of bichromate of potassa forms a yellow precipitate when the strength of the solution does not exceed one part of acetate in 100.000 of water.

4. Sulphuretted hydrogen detects one part of the acetate in 500.000 parts of water, by forming a dark-coloured sulphuret.

5. A piece of metallic zinc suspended in the solution of the acetate has deposited upon it metallic lead, and the solution contains an acetate of zinc.

The same tests detect all the soluble salts of lead, but they fail even to act upon the acetate, when the solution is acidulous.

As the acetate and the soluble salts of lead are all decomposed by animal and vegetable substances, if they have been administered in these, we can expect to find them only in the precipitates; and this is the case, also, when we have to examine the vomited matters, or the contents of the stomach. In these cases, however, the first step is to pass a stream of sulphuretted hydrogen gas through the substances to be examined, to collect the whole of the deposit and to boil it in diluted hydrochloric acid; then to filter; to dilute the filtered fluid; and, lastly, to test it with the usual re-agents. The hydrochlorate of lead requires thirty parts of water for its solution. What remains unacted upon by the acid should be calcined in a crucible, and the residue, after the crucible is cold, treated with nitric acid; after which apply a gentle heat to evaporate all the acid, and act upon the residue with distilled water; filter, and test with the usual re-agents.

If the *carbonate of lead* have been the poison, it is recognized as a heavy, white powder, insipid and inodorous, effervescing with acids; and when held over sulphuretted hydrogen it is tinged dark brown. When heated to redness in a tube it changes to the yellow oxide. The solution in nitric acid yields the usual results with the ordinary re-agents.

Treatment.—When a case of poisoning occurs, and we suspect the poisonous agent to be carbonate, or acetate, or diacetate of lead, our first object is to prevent the threatened bad consequences, and this is best obtained by the administration of sulphate of magnesia, which forms an inert, insoluble salt, with the oxide of lead, whilst the acetate of magnesia formed acts as a purgative, and carries the poison out of the habit. If the poison have been the diacetate, the solution of a sulphate, or distilled vinegar, should be used with the stomach-pump.

I have been much surprized to find the following remark in DIVERGIE's excellent work,—"Parmi les substances minerales (antidotes) le carbonate de soda, et le sulphate sont celles auxquelles il faut accorder le plus de confiance;" and the same opinion is maintained by Dr. CHRISTISON. Nothing is more hazardous than the administration of a carbonate. Phosphate of soda is more useful than the sulphate, as the phosphate is more rapidly formed, and it is as inert as the sulphate.

If colica pictonum be already present, and if the pulse be full and strong, we should abstract blood, but, in general, this is unnecessary. After purging freely with the sulphate of magnesia, or with castor oil, you should administer calomel in combination with sulphate of morphia; and when paraplegia and palsy of the wrists have supervened, strychnia, in the form of the acetate, and galvanism, are the remedies to be most depended upon.

In all cases where workmen have to work where fumes of lead arise, and can be inhaled, a sponge dipped in vinegar should be affixed to a mask, so that the fumes may be arrested. In prescribing salts of lead as medicines, they should always be washed down with distilled vinegar, an improvement which I first pointed out, and which every day's experience proves to be correct.

It is a curious yet an important fact, that

vessels formed of alloys of metals with lead, which are less oxidizable than the lead, poison the food cooked in them; but if the lead be alloyed with tin, which is a more oxidizable metal than the lead, the alloy does not poison the food.

LECTURES
ON
MATERIA MEDICA AND THERAPEUTICS,
NOW IN COURSE OF DELIVERY
AT THE
WINDMILL-STREET SCHOOL OF MEDICINE,
BY
GEORGE G. SIGMOND, M.D.

LECTURE XXIII.

THE ACONITUM NAPELLUS:—*This plant, the wolf's bane, one of the ranunculaceæ. Poisonous qualities of some of that tribe. Vesicatory property of the buttercup. Effect of water in reducing the noxious property of ranunculus. Emetic quality of the ranunculus flammula. The aconitum napellus. Its appearances and locality. Which is the aconite of Stoerck. The aconite adopted in the College Pharmacopœia. Its cultivation. Its effects on the tongue. Its leaves. Its root. Effects of aconite as a poison to criminals. External application of its juice. Symptoms of poisoning with the aconite. The aconitum ferox. Poisoning of arrows therewith. Effects of aconite on the mind. The extract of aconite. The therapeutic powers of aconite in acute rheumatism. Its neglect in that disease. Its mispreparation by pharmaceutists. Its effects on the brain. Its power to produce absorption at the joints.*

GENTLEMEN:—As the aconitum napellus in its effects upon disease is somewhat similar to conium maculatum, or hemlock, I shall prefer describing this plant and its powers, and afterwards speaking of the diseases in which these herbs are recommended, to examining each separately.

The aconitum napellus, the common monkshood, or wolfsbane, belongs to the crow-foot or fig-wort tribe, the ranunculaceæ of botanists, which are remarkable for their possessing a great deal of acridity, and some of them are venomous. Thus the ranunculus acris is gathered upon a botanical excursion, with some degree of caution, for CURTIS, one of the cultivators of science, tell us that, on pulling it up and carrying it to some little distance, a considerable inflammation is produced on the palms of the hands; that cattle in general will not eat it, but that sometimes when they are turned hungry into a new field of grass, or have but a small spot to range on, they will feed on it, and their mouths become sore and blistered. This species, the ranunculus bulbosus, the ranunculus repens, and the ranunculus hirsutus, are all confounded by the rustic classes under the names of butter-flowers, butter-cups, king-cups, gold-cups, and they have the reputation of giving the yellow colour to the butter, but the fact is that the cattle generally avoid those flowers; they commonly, however, grow in the greatest luxuriance where the pasture is rich and exuberant, and hence the butter is richer, and the cow in a healthier state.

There are some individuals who inveigh bitterly against the butter-cup, and I have heard lately a very good botanist, not possessing certainly any great medical skill, declare that all those persons who are afflicted with scrofula, cancer, and herpetic diseases, owe their sorrow to the butter-cup, which, in his opinion, poisons the milk of the cow. That the ranunculus bulbosus, or butter-cup, blisters the skin there can be little doubt; indeed, the root has been used, and its juice expressed, for the purpose of raising blisters, which it does more speedily and with less pain than the Spanish fly, but that these roots are harmless when taken into the stomach is likewise ascertained from the well known fact, that they are eaten with impunity by boys, and that they are often boiled for the purpose.

The ranunculus arvensis, which generally grows in England where it is not accessible to cattle, is certainly very poisonous; it kills cattle quickly, occasioning colic, and gangrene of the stomach: three ounces of the juice killed a dog in four minutes.

The ranunculus sceleratus, as its name implies mischief, bears a very bad character; it very quickly produces sores of an aspect apparently very malignant when applied to the skin; hence it has been used by beggars to excite the compassionate assistance of the benevolent, and even the medical man has sometimes thus been deceived. The ranunculus thora, or scutatus, is employed by the hunter in Switzerland to envenom his darts.

The ranunculus aquatilis is less acrimonious than the other species, and Dr. PULTENEY found some feeders of cattle giving little else. It is singular that the growing in water should take away the noxious property of this species, for, in general, the deleterious effects of vegetables are increased by it.

The acrid principle of the ranunculus flammula rises in distillation, and the result is, an emetic, that acts at the very moment it has been swallowed. It deserves a place in our Materia Medica, for the late Dr.

Withering has shown, from his own experience, that it is of very considerable value as an emetic. It excites vomiting without producing any of those painful contractions at the cardiac orifice of the stomach, which follow upon the action of sulphate of zinc. In general, the cattle refuse this herb in its fresh state, and it has been observed, where they have accidentally partaken of it, that bloody urine was the consequence. None of the species seem to possess any narcotic power, though some of the families of the same tribe do. The principal use to which they can be applied is as vesicatories, and before the introduction of the Spanish fly they were thus used; that which renders them preferable is, that they produce less pain, and are not found to act upon the urinary organs; that which is objectionable is that they are more likely to leave behind ill-conditioned ulcers of the skin, which are difficult to heal.

The different members of the family of the aconites are narcotic and poisonous; some of them are most virulent, such as the aconitum ferox, and the one which is more immediately the subject of consideration, the aconitum napellus, "common monkshood," "wolfs bane," "leopards bane," or, as it is spelt by our English authorities, probably derived from the Saxon, "libbards' bane." From this old name, as well as from the authority of Sir James Smith, who found it growing abundantly on the banks of a brook running into the river Teme, in Herefordshire, and also by the side of the river; it has found admission into the "English Flora," but some have believed it not to be indigenous to this country. It has been very much cultivated in our gardens as an ornament, and its flowers, according to the colour of the corolla, have been more or less admired; some are white, some rose-coloured, some yellow, others variegated, whilst that which is generally preferred, and by some is said to be the most potent, has blue flowers. In the forests of Sweden it is found, and in the mountainous range of Carniola and Carinthia it grows most luxuriantly, and amongst some most magnificent specimens of the flowering plants of Carniola, sent to the *Medico Botanical Society* by Dr. Sigismond Graef, an indefatigable botanist of that country, were proofs of the luxuriance in which the aconitum napellus thrives there. The aconitum napellus, the plant till lately admitted into the London and the Edinburgh Pharmacopœias, has been thought, upon examination by Willdenow, to be a species different from the one which is recommended by Stoerck. The Dublin College has admitted the neomontanum, which answers more immediately to the description given of it as the medicinal plant.

I find that in the Pharmacopœia which is now to be the rule of conduct of the druggist and of the herbalist, that the *Royal College of Physicians* has determined to differ from those of Dublin and of Edinburgh, and to acknowledge the authority of one of the greatest botanists of the age, Decandolle, who, doubtless, from accurate examination and diligent investigation, has decided, that the aconite of Stoerck is the aconitum paniculatum, and neither the aconitum napellus nor the aconitum neomontanum. Acknowledging, with becoming deference, that the Royal College of London has followed one of the most scientific men in Europe, I still think that it would have been better, before it departed from the opinions of the learned individuals to whom had been entrusted their former editions, to appoint a committee from among their own body, for the purpose of ascertaining the correctness of the alteration before it was adopted. It would not surprise me, indeed, if the Royal College retraced its steps on a future occasion. I am by no means satisfied, from the inquiries that I know to have been set on foot to attain the truth, and certainly the task is not a difficult one, that the diligent author of the system which is so much followed is quite correct upon this point, and most probably it will not be long before the botanical world will have better means of judging of the propriety of a change. I am one of those who think that the alterations should be as few as possible, and only the result of the labours of English scientific men, who should, as is the case in France, be delegated to examine the investigations of others, and verify them before they are received as determined truths. I must observe that, were alterations to occur in obedience to the last-received opinion of every distinguished leader in science, we should be in such a state of mutability that to unlearn all the doctrines of the past would soon become as indispensable as the acquirement of the new lights which radiate around us, sometimes certainly with a steady and illuminating beam, at others as the meteoric flash, or the ignis fatuus, that for a moment gleams, but leaves us in a darkness more profound than we before were buried in.

It is my intention to speak, at present, of the aconitum napellus (though I do not believe that to be the aconite of Stoerck), because it must, at any rate for the present year, be the herb that will be employed. It is the species that the herbalist will this season depend upon; of course, at the next sowing, he will plant that which the Royal College has chosen to select as the proper one for medicinal purposes. Whether any material difference exists in the poisonous qualities of the two species I am not prepared to say, but I should imagine that the College has sufficient ground for the belief that they approximate to each

other. The only translator of the Pharmacopœia that has expressed any opinion on the subject is Dr. COLLIER; the others have not even noticed the alteration, he says "the aconites of our gardens are not adequate substitutes." The remarks upon aconitina by Mr. PHILLIPS are very useful, but no allusion to the aconitum paniculatum, as the one from which the alkaloid is to be obtained, is made, though the experiments that have been instituted by PALLAS, by GEIGER, and others, have always been made upon the aconitum napellus. The general opinion is, I believe, that which WILDENOW originally suggested, and I find, in the "London Dispensatory," that Dr. THOMSON considers that the neomontanum is the species which should be medicinally used. Most of the foreign Pharmacopœias still retain the napellus, which is known in France as the "chaperon de moine," and in the German as the "eisenhut and sturmhut," and the four species napellus, cammarum, neomontanum, and tauricum, were thought by CARL GRAEF, of Berlin, to be the only medicinal ones.

The aconitum napellus has a simple root, which is woody; its stem rises three or four feet, leafy, and terminates by an elegant spike of flowers, which are developed in June and July. The leaves, which are of a dark green on the upper surface, and paler underneath, are smooth and shining; they are palmate, and divided into five cuneiform segments; they are deeply cut, and toothed; they stand alternately, upon long-channelled footstalks, which gradually grow shorter as they reach the top of the stem. The flowers are of a deep violet colour, supported upon short peduncles. They have no calyx; two small bracteæ are placed on the flower-stalk, a short distance from the flower. There are five petaloid sepals, the uppermost helmet shaped, and beaked, covering the petals, or nectaries; the lateral ones broad, roundish; the lower oblong, elliptical. The petals usually called nectaries are two, which lie hid under the upper sepal; each nectary is furnished with a hooked spur, with the lip lanceolate, revolute, and bifid. The stamens are filiform-purple, and supporting whitish anthers; the germens are three, four, or five, with simple reflected stigmas, and become capsules, enclosing many angular, wrinkled seeds. The aconitum cammarum is sometimes mistaken for the aconitum napellus, but the flowers are of a paler colour, the helmet is larger, and its stem about six feet high, and the leaves are wedge-shaped. The aconitum napellus is very hardy, it grows almost in any soil or situation, and multiplies greatly by its roots. All the species of this family may be propagated by seed sown during the autumn, in a shady situation, and the plants will appear in the following autumn.

The cultivated plant appears to be better than the wild one, for medicinal purposes. Though it is a hardy perennial, still it is better to keep the ground free from weeds, to water it the first season in dry weather, and then to transplant it where it is intended to remain; they then merely require, in the autumn, to have the stalks cut down when they have done flowering. More attention has been lately paid to the cultivation of the aconite, from the demand having increased for it in the market, but until within a very short period it has been comparatively much neglected. The knowledge of the day may again call it into the repute it once enjoyed.

The leaves of the aconite when chewed (as Sir BENJAMIN BRODIE tells us) produce a sensation of numbness in the lips and gums, which does not subside until after two or three hours. It is very singular that some plants have an extraordinary effect upon the tongue, and yet when taken into the stomach do not appear to have so much deleterious influence upon the system as might hence be inferred. Some of them, however, are dangerous poisons; I believe the most remarkable is one I have had occasion to refer to before, the caladium seguinum, or the dumb cane, one of the arum tribe, a native of the West India islands, and of the continent of South America: this produces the most singular effect. A gardener, who incautiously merely bit a piece of the dumb cane, had his tongue swelled to such a degree, that he could not move it; he became utterly incapable of speaking, and was confined to the house for some days, suffering the most excruciating torments.

The root, in its fresh state, is highly acrimonious, but this is not the case when dried. If just gathered and applied to the tongue it produces, after a short time, considerable tingling. REINHOLD, on masticating a portion of it, found at the first moment that it was mild and somewhat agreeable, but shortly afterwards numbness of the apex of the tongue came on, then the lips, the gums, the velum palati, and the root of the tongue, had a sensation of burning given to them, which was followed by a tremulous motion, and then a sense of coldness: these uncomfortable feelings did not very quickly disappear. STOERCK made various applications of the dried powder to the different tissues, both in a healthy and diseased state, but nothing worthy recording was the consequence.

Various experiments have been made on animals by different individuals, to ascertain the effects of aconite. WEPFER, SPROGEL, HILLEFELD, ERRHART, ORFILA, and Sir BENJAMIN BRODIE, have investigated this subject, and it appears that the juice of the leaves causes speedy death, whether introduced into the stomach or rectum, or if

injected into the cellular tissue; that the root acts still more energetically; that the extract prepared by the expression of the juice is nearly as destructive as the juice; that the decoction is less active; that these different products of aconite are absorbed, and carried into the circulation; that they act upon the nervous system, more especially upon the brain; and that they also have the power of producing local irritation in the parts to which application has been made. A decoction of the root destroys the common bed bug, and its powder, mixed up with butter, is employed in Carniola to destroy mice, instead of arsenic, or, from its power, ratsbane, as it is commonly called. Numerous are the instances of its destructive agency upon man.

Mathiolus, in his Commentary upon Dioscorides, gives us the result of its trial upon four criminals, two at Rome, and two at Prague. Two of these unfortunate persons were saved by medical means, after having undergone the most dreadful torments; paralysis, vertigo, convulsions, horror of mind, occurred in one case, and the recovery was attributed to the early vomiting after the exhibition of the poison. To one of the two who died no bad symptoms occurred after a drachm had been given, and he had retained it for half an hour. Mathiolus then gave him a portion of the leaves and of the stem; he shortly after became idiotic; a cold sweat bedewed his face, asphyxia, spasm, fainting, involuntary stools, bilious and livid vomiting, loss of speech, and death by apoplexy, were the result.

A criminal, also, we are told by Mathiolus, ate of the aconitum cammarum, which Haller and others believed to be the napellus, and the consequence was that, at the end of two hours, he was seized with vertigo; the sensation in the brain was, that he thought his head was full of boiling water; an universal swelling of his body took place; the countenance became of a most livid and ghastly hue; the eyes were protruded from their sockets, and the poor wretch died in the most horrible convulsions. The Sepulchretum of Bonetus, and the Memoirs of the Swedish Academy, contain cases of a similar character.

The juice of the aconite locally applied has been known to produce very marked poisonous effects; applied to a wound on the thumb, it has caused pain in the hand, suppuration, and mortification, accompanied by symptoms of constitutional disturbance, cardialgia, anxiety, dread of suffocation. Orfila has not only given us his own experiments, but the cases he has collected from others, in his useful treatise on poisons.

A narrative is given by Murray, of Gottingen, of the death of three individuals in Sweden, who were poisoned by the aconite, which, he observes, is quite as deleterious in a cold as in a warm climate. One person was seized, after eating it, with insanity; when the surgeon saw him he laughed at the possibility of this effect occurring from the herb: he ate a quantity of it himself, and gave a portion to a military friend who accompanied him; both, however, paid the penalty of their temerity; a lasting sleep overcame the surgeon, and after death livid blotches were visible upon his neck, his back, and other parts of his body. What has been stated of the effects produced by carrying a quantity of it, appears rather to be attributable to idiosyncracy than to its general power; but it has been stated that a young girl, who carried some in her bosom, suffered swelling of the body, great anxiety, fainting, and other disagreeable symptoms.

The "Journal de Chimie Medicale," for March, 1835, contains an interesting notice of the aconitum ferox, and of the poison which it furnishes, from the pen of Richard; he obtained from Dr. Cassanova, who had for a long time resided and practised in British India, some of the roots of this species of aconite, with which the Nagas, a tributary neighbour of Silhet, poison their arrows, and which appears to be one of the most deadly poisons extracted from the vegetable kingdom. Since the residence of Dr. Wallich in Nepaul, the English have become acquainted with this formidable poison with which the native tribes, close to the Himalayan mountains, imbue their weapons of warfare. The plant appears to approach, in its structure and its botanical character, to the aconitum napellus, and has been described and delineated by the celebrated botanist, Dr. Wallich, in the "Plantæ Asiaticæ Rariores." It grows upon the elevated chain of the Himalayan mountains, and is likewise found in the provinces of Sirmore, Kamaun, and Nepaul. It varies very considerably in shape and size, according to the situation in which it has been found. In the neighbourhood of plains it is not so finely developed as when growing upon great elevations, and the nearer its approach to mountains covered with eternal snow, the more luxuriant is its vegetation.

There are three other species of the aconite, having tubercular roots, growing to the south of the Himalayan mountains, which are regarded by the natives as violent poisons; but the ferocious aconite surpasses them all, and seems to be the most decided vegetable poison of the continent of India. M. Richard believes the bish, or bikh, which is the principal defence of the Gorkalese against an invasion, from their infecting the streams with this poison, to be the aconite, and this he thinks from the specimens in the herbarium of Dr. Ha-

MILTON (which are now in his possession), of three plants which were collected by that gentleman, and which are identical with that which is known as the aconitum ferox. The course of experiments made by him proves how destructive it is to animal life. The poison of the Nagas has been the subject of experiment; and from the fourth volume of the "Transactions of the Medical and Physical Society of Calcutta," we learn that a fowl, slightly pierced by a penknife, on the point of which some of it was placed, died in five minutes. Captain GRANT states, that when on a trip to Kabbool, he made every endeavour to find out from what tree it was obtained, but could not. The Nagas could not be induced, by promise or reward, to discover it, but referred from one to another. They all agree in their description of its being of enormous size. The poison is extracted by making incisions in the bark, from which it oozes. The men who are employed in collecting it are obliged to take the greatest precautions, and cover their mouths and faces whilst engaged in doing so. They are fed by the hand of a second person all the time, and for several days after they have given up working.

With MURRAY, of Gottingen, I feel that it would lead to very little purpose to enter upon a large but, after all, a barren field of inquiry, from which, whatever might be gleaned, little practical knowledge could be gained, as to the debated question whether the "aconitum napellus" is the "aconite" of THEOPHRASTUS, of DIOSCORIDES, and of PLINY. Our knowledge of the powers of the plant called the deadly aconite, does not enable us to come to any decided opinion, but it seems to have been of a much more active nature than ours; it was considered so deleterious, as to have obtained its name from the foam issuing from the mouth of CERBERUS, the watch-dog of Hell, whilst others give the honour of the name to HECATE, a very important personage of those regions, who seems to have been honoured with a prescriptive right to wield poisons.

Various are the opinions as to its effects upon the mind, and different statements of these have been made. VAN HELMONT speaks of its power of debilitating the mental faculties, and it is the only notice I have been able to find in his works upon the subject, though my curiosity was excited to inquire into his own expressions on the subject, for, in a very curious article in the older volumes of the "Annual Register," upon the effects of narcotics upon the mind, it is there stated that VAN HELMONT bit a piece of the root of the aconite, and immediately felt a very delightful sensation, and an agreeable delirium, which lasted for two hours, but these were then succeeded by a train of very uncomfortable symptoms; and it is likewise stated, that although he afterwards tried the same experiment, he never could obtain the same results.

The extract of aconite ordered by the Royal College of Physicians, is intended as a preparation to supply the place of that which STOERCK introduced; and they have taken DECANDOLLE as their authority for the aconitum paniculatum, of which they direct a pound of fresh leaves to be bruised, sprinkled with a little water, in a stone mortar, and then that the juice should be pressed out, and evaporated, unstrained, to a proper consistence. This extract is incomparably more active than those that are obtained by any other process; and ORFILA has stated that many of those that are formed by other means possess no virtue whatever. It should be of a yellowish colour, not so black as those which are generally found in the shops, and which, by being for some time kept, have undergone decomposition. RICHARD, the apothecary to *La Charité*, prepared all the extracts of aconite with which ORFILA tried his experiments, in this manner. REINHOLD found that from four pounds of the recent leaves he obtained, by expression, twenty-five ounces and some drachms of the pure juice, and from about twenty-two ounces, gently evaporated into the proper consistence of an extract, he obtained about two ounces and a half, of a reddish-yellow-coloured medicine. In about a year the power was lost, but of that which was fresh, from half a grain to two grains was given. Sometimes vomiting was excited by it. STOERCK recommends the plant to be gathered before the flowers are developed, but STOLLER used both herb and flower. When dried the leaves lose their odour, and some of their narcotic power. Dr. LOMBARD, of Geneva, prefers the alcoholic extract, and he has lately tried at Geneva its effects in the treatment of acute articular rheumatism, a practice which has had, in former days, the greatest testimonies of approbation, and which seems to be very well worthy of revival. In fact, the Germans used to extol the aconite in rheumatism, as a specific. STOLLER, GUERIN, GESNER, GMELIN, FRITZE, and ANDREAS MURRAY, have given us the result of very considerable and judicious experience upon its employment.

From all that has been written by a vast number of men of great practice, of watchful mind, and of the most unquestionable integrity, aconite is one of the most important therapeutic agents in certain states of rheumatism. I have had occasion to tell you that, in the very early stage of acute rheumatism, when the patient has just been seized, and where the muscular system only suffers, DOVER'S powder is an invaluable agent, if blood-letting have not been the first remedy, which it very often is, and that it may be considered a specific; but when the joints are tumefied, when they are

painful, and the suffering is aggravated by the slightest touch,—when the swelling is diffused and elastic, and the skin is intensely hot, aconite is the most serviceable remedy with which we are acquainted. It is sometimes extraordinary, when not only the subcutaneous and deeply cellular tissue are affected, but even the cartilages of the knee-joint, the periosteum, and the articulating capsules are evidently the seat of rheumatic inflammation, how speedily pain is relieved, and health restored, by the administration of this agent, which Dr. LOMBARD has reason to consider acts specifically, and great praise is due to him for the revival of a practice which had obtained, in former days, the sanction of the greatest authorities of the continental schools. In gout its efficacy does not seem less decided.

In all the various seats of rheumatic inflammation, whether the disease have been of long or short duration, however great the agony which has been expressed, however incapable the limbs have been of bearing the slightest motion, aconite has been acknowledged to have proved of the most decided service; the testimonies in its favour are so numerous, that I have felt surprised that, in this country, it has not been a favourite; and I can only attribute it to the want of a good supply for the use of the practitioner, and, certainly, the carelessness with which the herbalist has treated this remedy, has been sufficient to prevent its more frequent employment. It was not STOERCK alone who praised aconite; we find not only the German physicians, but the Swedish medical men, loud in extolling its merits, and they are generally slow, but right, in the conclusions to which they come. ROSENSTEEN gave an interesting narrative of a young female who suffered almost martyrdom from rheumatism in the hipjoint, for no less a period than eight months, but who within two weeks from the trial of this remedy, was restored to health. BLOM and ODHELIUS, in few words, express their satisfaction on employing it at the hospital in Stockholm. RIBE has narrated an interesting case of a female who, besides suffering the most intense agony, and perfect incapability of moving her arms, had her muscles contracted and hardened, so that they almost wore the appearance of ivory.

There are many foreign writers who have added testimonials in favour of aconite, but the one, probably, that outweighs all others, is the benefit which happened to the veteran professor of Materia Medica, at Gottingen, ANDREAS MURRAY, who, in his invaluable "Apparatus Medicaminum," says, "Possem si opus esset plura rheumatismi exempla curati etiam ex propria experientia addere et nominatim, ischiadis nervosæ cujus ante paucos annos tormenta atrocissima ipse sensi sed vesicatorio et Napello brevi discussa." When the limbs have begun to be rigid, to lose all power of motion, and even where the muscles have begun to waste away, and however apparently hopeless, from the contractions that have taken place, the case may seem, the number and variety of successful cases give us every reason to anticipate a successful result from this powerful remedy.

Notwithstanding all that has, at different periods, been urged as to the value of aconitum in rheumatism, it would, probably, have been consigned to oblivion, and colchicum would have remained the favourite remedy, had not Dr. LOMBARD, of Geneva, instituted his experiments, which deserve, at our hands, the warmest eulogiums. In France, the failure in producing a good effect has been uniformly attributed to the very injudicious means of obtaining the extract. It appears there, that it has been the general custom to import from Germany, and from Switzerland, the dried plant, from which, without a proper attention to the degree of temperature, they make their extract. M. SOUBEIRAN, in a valuable paper which is to be found in the "Journal de Pharmacie," recommends a tincture made of eight parts of alkohol, and ten of aconite; maceration is to go on for ten days, and then filtration; he quotes both BRACONNOT and BUCHOLZ, who have pointed out that the active principle must be dissipated by heat, in forming the usual extract. The editors seem to coincide with the opinion of SOUBEIRAN, and from their denominating the napellus "une racine precieuse," it is evident that the feeling in favour of this remedy has not been dimished. The system pursued, of placing in the hands of a committee of the most distinguished men, any object of inquiry brought before the scietific bodies for investigation, and for drawing up a report, might be followed with no small advantage in this country.

The failures that were so often experienced from the employment of the common extract, either from the presence of too much vegetable matter diluting the active principle, or from some fault in the preparation, induced Dr. LOMBARD to try an extract obtained from the expressed juice of the plant, subjected to slight boiling, in order to coagulate the vegetable albumen; this was evaporated in a sand bath, treated with alkohol filtered, and then again evaporated at a moderate temperature. He obtained by these means an extract, upon whose efficacy he had, from repeated trials, every reason to depend; the volatile principles were not dissipated, as in the ordinary extracts, and the active principles underwent no modification by the application of heat. This alcoholic extract of monkshood, Dr. LOMBARD agrees with others, possesses a specific virtue in dispelling rheumatic fluxions

which have been determined to the articulations; he believes its power not to be confined to the immediate vicinity of the articulations, but to extend to the synovial membranes, and to essentially contribute to excite the absorption of fluid effused within them; its action is speedily evinced, and patients have stated to Dr. LOMBARD, that they have felt great alleviation of their sufferings in the course of an hour; this, however, is not a general law; from twelve to twenty-four hours form the usual period of improvement. A certain degree of excitement of the brain attended upon its administration, marked by a degree of gaiety, great vivacity, and nocturnal visions; in no one case did he perceive any disagreeable effects arise, although he has administered as much as a drachm and a half in twenty-four hours. In only one case did it act as a sudorific; he does not attempt to explain its mode of action, but contents himself with the idea, that it is a specific against rheumatic congestions. It acts upon the excretions neither by altering their appearance nor their quantity. He found it not requisite to combine the aconitum with any other drug, and, therefore, prescribed it alone; he began with one-fourth, or half, of a grain, which he gave two or three times a day. The original paper is in the "Gazette Medicale,' but you will find all that is necessary extracted and condensed in the "Edinburgh Medical and Surgical Journal" for 1835, the outline of the cases from which Dr. LOMBARD draws his inference is given, and the most important points are very clearly stated.

This power of producing absorption at the joints has, from an early period, been attributed to aconite, and in gout it had met with the commendations of STOERCK, but it was ascribed to its sudorific agency; and its effects upon the transpiration by the skin, were promoted by confining the patient to bed, and giving him large quantities of ptisan; for this purpose, ROSENSTEIN ordered an infusion of the flowers of the elder; sometimes perspiration was thus promoted over the whole of the body, at other times it was confined to the affected part. GESNER observed, that considerable tingling of the skin, pustules full of fluid, and desquamation, followed. The same remark that Dr. LOMBARD makes, as to the rapidity of its action in rheumatism, is made by many of those who, at an earlier period of its introduction, employed it. Those who had suffered for years, and, indeed, were deemed incurable, are stated to have been free from pain in an incredibly short space of time, and to have had the swellings of the joints completely dissipated.

ON THE

INCORRECT FORMATION AND IMPURITY

OF

PHARMACEUTICAL PREPARATIONS,

ESPECIALLY OF THE

CARBONATE OF IRON.

By J. HILEY, *Esq., Surgeon, Elland.*

THERE is, perhaps, nothing so necessary to ensure success in the treatment of disease as the exhibition of medicines in a state of purity. The truth of this observation I had many times an opportunity of witnessing to its fullest extent in the course of the practice of my late father. My attention has, however, been forcibly drawn to it by a circumstance which lately occurred in the course of my own practice, and as it is of considerable importance I think I shall not be deemed troublesome if I intrude a few remarks on the pages of THE LANCET. In the course of this article I shall be enabled to show, by numerous facts and experiments, how often the really skilful practitioner fails in his attempts at treating disease successfully, solely from the want of pharmaceutical preparations procured according to correct formulæ. This remark applies not only to the materia medica, properly speaking, but also to the preparations and compounds which have their origin in the mineral kingdom. It is with the latter that I have now to deal.

In the early part of the spring of 1835 a severe case of tic douloureux came under my care,—a case which, for a considerable period, baffled and withstood all my attempts at removal, and I had almost given it up in despair when it occurred to me that the cause of my failure might lie with the remedial agents which in the course of treatment I had found occasion to administer. My suspicions were awakened to this by the fact that I had noticed that of two specimens of proto-carbonate of iron made use of in this case one was much more effectual in its operations than the other. I determined, therefore, if possible, to discover the source of my failure.

Before, however, I attempt to state the measures adopted by me for the accomplishment of this end, it may be necessary to observe, that the case of neuralgia was one of the severest character; it was confined to one side of the face; the paroxysms occurred every seven minutes, with such severity that, though the patient was a stout man, nearly 50 years of age, he actually shed tears under this most painful of human sufferings. The slightest cause was often

sufficient to occasion an attack; as, for example, turning in his chair, speaking, or a breath of wind. Any attempt to feel his pulse was generally attended with excruciating agony. Such being the case, the most active treatment was had recourse to, and the measures adoped for its cure were the employment of narcotics, nervines, and local irritants. The division of the affected nerve was not attempted, inasmuch as the patient, notwithstanding the sufferings under which he laboured, was unwilling to submit to the operation. Several decayed teeth were extracted. Amongst the narcotics, opium and belladonna were exhibited without effect. Of the nervines two were used, viz., quinine and iron, whilst the local irritants employed were leeches, blisters, &c. Any other treatment was adopted which the necessities of the case required.

I did not observe any method in the exhibition of these different agents. At one time I was administering narcotics, at another employing local irritants, and, during a third, I was giving bark or iron.

The disease was considerably protracted; the mode of cure followed by me was wholly unsuccessful, and the administration of the various remedial agents considered beneficial in this distressing complaint, was like throwing pearls to swine. In the course of my treatment I had, however, observed that the greatest benefit to the patient resulted from the use of the proto-carbonate of iron. But, as I have before mentioned, a remarkable circumstance attending the employment of this salt was, viz., that of two specimens of proto-carbonate of iron which I used, one appeared to be inert, whilst the other was somewhat more efficacious. My curiosity was a little excited, and I determined, if possible, to discover the cause of the dissimilarity in the effects of the two carbonates, for though it had been long known that the chemical constituents of the proto-carbonate of iron (Fe + C) were liable to change, and that this change impaired its medical virtues in certain forms of disease, yet I must confess that I never saw this last-mentioned fact so well exemplified as in the instance before us. Accordingly, I set about their analysis, inasmuch as this appeared to me the most likely way of discovering the source of the difference. I must not forget to state, that the inert specimen had been in my possession a considerable time, whilst the other had been recently purchased by me.

Before I proceed to give the results of my analyses, it may be advisable to make a few observations respecting the preparation of this salt, in doing which, I may notice that the inconstancy in the activity of this remedy is, probably, owing to the different modes of preparing it. The method recommended by the London Pharmacopœia is a tolerably good one, if it could always be adopted. There, we are ordered to take of—

Sulphate of iron..... 8 oz.
Subcarbonate of soda .. 6 oz.
Boiling water .....a gallon.

Dissolve separately the sulphate of iron and the subcarbonate of soda in four pints of water; then mix together the solutions, and set the mixture aside, that the powder may subside; then pour off the supernatant fluid; wash the subcarbonate of iron in hot water, and dry it, wrapped up in libulous paper, with a gentle heat.

This process is less liable to objection than those recommended in the Edinburgh and Dublin Pharmacopœias, but still it is not perfect, for there is one great objection to it, viz., the drying it with a gentle heat. Now, it must be kept in mind that the iron in the subcarbonate, when first precipitated, is in a state of protoxide. This protoxide, however, during the time of drying, is very subject to attract another atom of oxygen from the atmosphere, and thus become a peroxide, in which state it will not combine with carbonic acid. It is for this reason, therefore, that the proto-carbonate of iron of the Pharmacopœias is of a red colour, consisting principally of peroxide. This tendency in the protoxide to absorb oxygen is so great, that we have never been able to collect it, and till the deservedly-celebrated Stromeyer pointed out a method of preparing it, this oxide was unknown in a state of purity.

There is, likewise, another difficulty to encounter in the preparation of proto-carbonate of iron. In place of decanting it from the solution of sulphate of soda, its levity renders the process of filtration almost indispensable, in performing which, it is obvious that it must, in consequence of exposure, attract oxygen from the surrounding air, as in the former instance. The method recommended by Dr. Boswell Reid differs from this, only in the precipitate being ordered to be filtered, and of course is open to the same error. There is another process, introduced by Mr. Clarke, which is deserving of some attention, as being probably the best. He recommends the precipitate to be washed in a deep jar, and this washing is to be performed repeatedly, so as to wash away all the sulphate of soda. This it is not difficult to effect, inasmuch as the sulphate of soda is very easy of solution. The precipitate is then to be thrown on a cotton or linen cloth which is supported by a funnel, or square frame, in such a manner as to allow any superabundance of water, which may be in the precipitate, to filter through, and when it ceases to do so, the edges of the cloth are to be drawn together, and the remainder of the water to be pressed out with the hands. Whilst this is going forward, Mr. Clarke observes, that the carbonate attracts little or no addition of oxygen.

This last process is by far the most advantageous, providing it is as effectual as is stated by Mr. Clarke. My own experiments, however, go to prove that it is not altogether free from objection, for I found that the exposure to the atmosphere, which was consequent on throwing the precipitate upon the cotton or linen filter, was attended by a sufficient absorption of oxygen materially to deteriorate the medical virtues of the salt. Notwithstanding this, it will be found no easy matter to improve upon Mr. Clarke's method.

The plan which I have been in the habit of following is, to prepare the article often, so as to have it in as fresh a state as possible, and to preserve it in a well-stoppered bottle. The process of collecting and washing the proto-carbonate of iron on a filter is decidedly bad, for though the funnel be kept covered with a glass plate, still the accession of atmospheric air cannot, in consequence of the tediousness of the filtration, be sufficiently obviated to ensure to the experimentalist a good article.

With regard to the first part of the operation, I have been in the habit of using a modification of Mr. Clarke's. I have made use of a stoppered bottle instead of a jar, and when dissolving the sulphate of soda from the proto-carbonate of iron, have always found it advisable to fill the bottle entirely with hot water, in order to exclude, as much as possible, the access of atmospheric air. It was the more necessary to observe this precaution, because I noticed more than once, when the bottle was but partly filled with water, that the oxygen of the air therein contained, was liable to combine with the iron, and thus produce the very change I was endeavouring to avoid. The water, it will be found, is not a sufficient protection, for, though it may be of a high temperature when poured on the precipitate, and of course free from all atmospheric air, yet it soon cools, and as this cooling goes forward, I have found from experiment that the absorption of air commences, which is then conducted from the water to the precipitate. When, however, the bottle at the commencement is perfectly filled, this alteration in the constituents of the proto-carbonate of iron, occasioned by atmospheric influence, is in a great measure prevented. After the powder has been sufficiently well washed, and has subsided to the bottom of the vessel, the supernatant liquor may be decanted, leaving, however, a sufficient quantity behind to cover the precipitate. The residue is then to be thrown rapidly on a filter made of linen cloth, and the remaining water squeezed through by the hands. In these processes there is always some loss of material, but it is better to submit to this, than to hazard the success of the whole experiment. The proto-carbonate of iron is to be put into a bottle which it will perfectly fill, and preserved in a dark place for use.

Having said thus much respecting the preparation of this agent, I will now turn my attention to the analyses of the different specimens which came before me.

I made seven analyses, viz., of the two specimens which I had in my own possession, and of five others which I purchased at different respectable shops. Add to this, I examined three samples of the proto-carbonate of iron prepared by myself. In following this plan I considered I should be more likely to come at the truth, than by confining myself to one solitary example. It will be seen from the results of these experiments how very variable the composition of this salt is, and as such, if we are to suppose that the successful treatment of disease at all depends on the genuineness and purity of the medicinal agents employed, we must all admit that the proto-carbonate of iron of the Pharmacopœias is very little to be depended upon. When this salt, however, is prepared with the greatest possible care, either after Mr. Clarke's method, or according to the plan laid down by myself, though the iron gains some addition of oxygen during the process, yet this addition is not so great as materially to injure its qualities. It is only from carelessness in the preparation, exposure to the air, or long keeping, that the proto-carbonate of iron undergoes a chemical change.

One circumstance, which I observed whilst making this salt according to the formula laid down in the London Pharmacopœia, is deserving of notice, inasmuch as I think it may be applied with some practical utility. During the filtration of the sulphate of soda solution from the precipitated proto-carbonate of iron, the surface of the latter, in consequence of exposure to the air, becomes covered with a coating of peroxide of iron. This coating, however, appeared to be of considerable service in preserving the lower layers of the proto-carbonate from the same action; for though I allowed a funnel, holding a quantity of this preparation, to lie uncovered for several hours, nay, over night, yet still the proto-carbonate of iron underneath the peroxide remained nearly unacted upon, and from some experiments which I tried upon it, appeared to be as perfect a proto-carbonate as could well be made. Trifling as this circumstance may seem, still I think it may be rendered very useful in the formation of this salt, for by taking the precaution to scrape off this layer of peroxide, the remaining carbonate might be introduced into a bottle, little deteriorated in its medical virtues.

According to Mr. Phillips this preparation, when made with every possible care, contains 15 per cent. of carbonic acid, and, consequently, if this observation be correct,

in 100 parts there will be of proto-carbonate of iron 40, and of peroxide of iron 60. The same able chemist also observes that this compound in general consists of about—

Carbonate of iron	4
Peroxide of iron	96
	100

Dr. Thomson, in his remarks on this salt, has the following passage:—"In our experiments ten grains of the dried subcarbonate of iron, prepared with effloresced subcarbonate of soda, lost 2.3 grains, when dissolved in muriatic acid; and the same quantity, prepared with the crystallized alkali, and dried with care, lost 1.4; so that prepared by the former method it contained 23 per cent. of carbonic acid, and in the latter 14 per cent.' Why the proto-carbonate of iron, prepared with effloresced subcarbonate of soda, should contain more carbonic acid than that prepared with the crystallized alkali, is a difficult problem to solve.

The results of my own observations and experiments lead me to differ, in a slight degree, both from Mr. Phillips and Dr. Thomson, for I have analyzed specimens of this salt which contained a larger quantity of carbonic acid than they have specified; and, on the contrary, I have examined others which contained little or none. The truth of this assertion I will show immediately. Of the two specimens of carbonate of iron which I had in my own possession, and which I administered in the case of tic douloureux, alluded to in the early part of this essay, the first yielded on analysis, in 100 parts, of—

Carbonic acid	1.138
Protoxide of iron	1.862
Peroxide of iron	97.000
	100.000

The second contained in 100 parts of—

Carbonic acid	4.5518
Protoxide of iron	7.4482
Peroxide of iron	88.0000
	100.0000

It was this last specimen which afforded most relief to my patient who was labouring under tic douloureux.

Of the five remaining specimens, the following are the analyses:—In the first and second I was somewhat surprised to find on examination that the whole of the iron had been converted into the state of peroxide, and, consequently, no carbonic acid was present. The third example, however, yielded a good supply of this agent, for 100 parts afforded of—

Carbonic acid	5.1208
Protoxide of iron	8.3792
Peroxide of iron	86.5000
	100.0000

The fourth specimen I procured at a most respectable house, and, consequently, I expected that it would be somewhat superior to any of the others. In this I am happy to say that I was not disappointed, for I found on analysis that it contained 15 per cent. of carbonic acid. Such a result, however, very rarely happens, for the carbonate of iron of the Pharmacopœia is, as has been already shown, in general a hydrated peroxide of iron, a medicine not nearly so efficacious as the real proto-carbonate. An additional force is given to this observation by the results of my analysis of the fifth specimen, 100 parts of which I found to contain of—

Carbonic acid	2.5414
Protoxide of iron	4.1586
Peroxide of iron	93.3000
	100.0000

The analyses of these five salts convinced me satisfactorily that the carbonate of iron, as sold at the shops, was very little to be trusted to as a medicinal agent; I, therefore, set about the preparation of it myself, after the plan laid down in the early part of this essay, and of three specimens which I made at three separate times, I found that the carbonic acid in each bore a greater proportion to the iron than in the samples of the same compound which I obtained at the market. Besides this, they were infinitely superior in their curative properties, for the case of tic douloureux, which had resisted every other kind of treatment, yielded to half-drachm and drachm doses of one or the other of these carbonates.

In making the proto-carbonate, I followed the formula given in the London Pharmacopœia, and by using every precaution that I could well suggest, I obtained a compound by my first experiment, 100 parts of which yielded an analysis of—

Carbonic acid	28.3210
Protoxide of iron	46.3435
Peroxide of iron	25.3224
	99.9869

In my second experiment I was not so successful, for 100 parts of this proto-carbonate yielded an analysis of—

Carbonic acid	27.5321
Protoxide of iron	45.0525
Peroxide of iron	27.4253
	100.0099

The third and last trial afforded the best results, for in that instance I obtained a proto-carbonate, 100 parts of which on analysis I found to contain of—

Carbonic acid	33.7610
Protoxide of iron	55.2452
Peroxide of iron	10.8926
	99.8988

The results of these three analyses satis-

factorily show how superior in quality the proto-carbonate of iron is when formed after the method before laid down. As such, medical gentlemen will do well to prepare this agent themselves, if they would procure an article possessed of the properties which have been attributed to it, for after what has been advanced it cannot be denied that the carbonate of iron, as sold at the shops, is not chiefly a hydrated peroxide of iron, a compound possessing not nearly so much efficacy as the real proto-carbonate.

Again.—The variableness and inconstancy in the qualities of carbonate of iron have long been imputed to the change which that salt undergoes in its constituents, but I never remember to have seen a case where this supposition was so well grounded as in this instance. The power of this compound over tic douloureux is neither to be ascribed to the iron nor to the carbonic acid singly, but to the salt formed from their union, and this salt, it would appear, is rendered more effectual the greater the proportion of carbonic acid contained in it. Did this proto-carbonate owe its property of curing tic douloureux to carbonic acid alone, we should suppose that other chemical agents, containing this gas, and holding it in firmer union, would prove equally beneficial in neuralgic affections. This, however, is not the case, for it is in its combinations with *iron* that it is principally useful.

The product of the third experiment was very effectual, for I found that the case of tic douloureux gradually yielded to scruple-half-drachm, and drachm doses of this medicine; and I am confident that whatever may be said in praise of the influence which the carbonate of iron may possess in the cure of diseases of this nature, yet still its value cannot be sufficiently appreciated until we have it in our power to prepare a compound, the constituents of which are agreeable to the laws of definite proportions. The last salt which I procured, it will be seen, contained rather more than 33 per cent. of carbonic acid, whereas it ought to have contained nearly 38. The three salts are still in my possession, and from some experiments which I have latterly instituted upon them, I have reason to believe that they are not much deteriorated in quality by keeping.

In conclusion, I may observe that the proto-carbonate of iron is not an artificial product alone. It exists native in great abundance, though seldom very pure. I have found it in the narrow streams of this neighbourhood, the waters of which have their rise amongst coal formations, containing considerable portions of impure iron ore, and native sulphuret of iron. It is not, however, very plentiful, for in most cases the protoxide of iron is in union with sulphuric acid. It is contained in most mineral waters, being held in solution by an excess of carbonic acid. A solution of this nature may be obtained by putting some of the pure proto-carbonate into a bottle containing carbonic-acid water. This solution possesses similar properties to those of the chalybeate mineral springs, and the iron may be detected by suitable re-agents. On exposure to heat, this carbonated chalybeate gives off its excess of carbonic acid, and the proto carbonate of iron is once more thrown down. The readiness with which carbonic acid dissolves the protoxide of iron is rather remarkable; and Dr. Marshall Hall has stated that water at natural temperatures is not decomposed by iron when it is completely deprived of carbonic acid. On exposure to air the protoxide, in union with carbonic acid, or with some other acid, takes up another atom of oxygen from that element, and in the state of hydrated peroxide subsides, giving rise to the ochreous deposit so commonly observed at the bottom of these streams, and in the neighbourhood of chalybeate springs. In the chalybeate waters of this country, the iron is sometimes combined with muriatic or sulphuric acid, but in general it is in the state of proto-carbonate, held in solution by free carbonic acid. The most noted chalybeate waters in Great Britain are those of Brighton, Cheltenham, and Tunbridge. As a mineral production, the proto-carbonate of iron is also met with in Cornwall, and in the county of Durham; in the former county accompanying copper ore, in the latter accompanying galena. The iron-stone, or clay-iron stone, which in these counties yields such an immense quantity of iron, is this carbonate of iron intermixed with other materials, as coal, clay, and limestone. Occasionally this salt occurs crystallized in mineral veins, which crystals are sometimes obtuse rhomboids, sometimes octohedrons and sometimes six-sided prisms. In colour it is now and then nearly black, but usually white, intermingled with a slight shade of yellow, or brown. The specific gravity of this salt is nearly 3.8, and its constituents when pure are—

1 atom of carbonic acid	22
1 atom of protoxide of iron....	36
	58

Elland, near Halifax,
July 24, 1837.

The First Part of a Treatise "On the Nature and Treatment of Diseases of the Heart, with some new Views of the Physiology of the Circulation," by Mr. Wardrop, has just been published, in 8vo., with plates, by Mr. Churchill, Princes-street, Soho.

REMOVAL OF A WORM FROM THE EYE OF AN ARAB HORSE.

To the Editor of THE LANCET.

SIR:—As surgeon, for many years, to the Bombay Eye Infirmary, I had, occasionally, through the kindness of friends, an opportunity of seeing diseases of that organ in the horse and other animals. To the pathologist, a close observance and comparison of diseases in animal life is both interesting and instructive.

Inclosed is a case of a worm in the horse's eye, which I successfully extracted. Such cases, I am informed, are not of very unfrequent occurrence in India. To such surgeons as, like myself, have been long located in India, and almost in the daily habit of seeing and removing the dracunculus, or guinea-worm, from almost every part of the human body, the mere surmise of the possibility of the human eye being the seat of this affection, will not appear to be entirely hypothetical. I have the honour to be, Sir, your most obedient servant,

WM. JEAFFRESON, Surgeon-Oculist.

Clarges-street, Piccadilly,
25 July, 1837.

A high-bred Arab race-horse, then in the possession of Captain Seton, town-major of Bombay, when under training was observed to become out of condition. The horse was dull, and "off its feed," and had, what I have invariably observed, the strange and almost unaccountable symptom of very great weakness in the loins. The eye affected was slightly weak, and watery, but free from any perceptible inflammation. The aqueous and other humours were in a perfectly natural state. A worm had been distinctly seen, for several days, moving about in the whole circumference of the anterior chamber, exactly like an eel in a bason of water, apparently in the full enjoyment of its natural element. It was nearly, if not quite, an inch long, of the diameter of sewing silk, and of a beautiful silvery whiteness.

Having previously secured the animal, by casting him on a soft bed of straw, in a strong light, several persons held his head down, securely. In the presence of many sporting gentlemen (one of whom secured the upper lid, with Pellier's silver elevator), with a common cataract knife I made a free crucial incision into the cornea, below the pupil. The aqueous humour, all escaping in a sudden gush, brought in its tide the worm with it, which did not long survive the change of its situation, continuing to writhe about, as if in the agonies of death.

The eye was now secured, much after the same manner as after the operation for extraction of the cataract in the human eye, taking measures to prevent the animal rubbing it against the manger. The wound healed without a bad symptom; the aqueous humour was soon reproduced; the sight was not in the least degree injured; and the animal rapidly improved in health, and became a great and deserved favourite on the turf at Calcutta, where he was afterwards sent, and won many races.

It is well to observe that in performing this operation a strong light is desirable, as it is a satisfaction to the operators to see whether the worm comes away with the aqueous humour. I have, in two instances, performed this operation, when the aqueous humour spirted into my face, and fell on the ground, and the worm could not be found, though, from the favourable issue of the cases, I infer that it must have come away. The worm does not always confine itself to the aqueous humour in the anterior chamber. I have seen it disappear, apparently, behind the iris, and again return through the pupil.

One cannot but conceive that much mischief is likely to arise from the continuance of the worm, even in the anterior chamber. How much more injurious would it be in the posterior and more sensitive parts of the organ, and out of reach of observation. It is true that I have no means of knowing it to be the fact, but, nevertheless, I firmly believe, judging from probability alone, that many eyes are lost from the same cause, simply by the inflammation and ulceration which are likely to be produced by the presence of an irritating foreign body of this kind.

VACCINATION AND RE-VACCINATION.

To the Editor of THE LANCET.

SIR:—As there exists at the present day a strong, and, I almost fear, a growing prejudice against the preventive power of vaccination, I beg leave to submit to the notice of the profession the following case, which appears to me to possess one or two points of interest:—

On the 17th of April last, William Kersey, æt. 25, a native of Wethenden, near this place, arrived at his home, from the neighbourhood of Leicester, where he had been working. He had travelled and slept with a man, on his route, who had just recovered from the small-pox. The day after his arrival at home he sickened, and became affected with the disease, in its distinct and mildest form. He was immediately carried to the pest-house attached to the union workhouse, where, under the treatment of Mr. S. Freeman, he passed favourably through the different stages of the disease. He had been vaccinated in early life.

In March, 1836, I vaccinated all the children (upwards of one hundred) in the parish of Wethenden, including the younger brothers and sisters of William Kersey, with one exception, that of his brother Isaac, a strong, healthy youth of eighteen, who, being at work at some distance from the village, did not apply to me with the rest. As soon, however, as I was called in to the case now mentioned, I procured some recent lymph, and vaccinated him, on Thursday, the 20th of April.

The vaccine disease appeared on the fourth day, and went through its usual stages without any unusual symptoms. On the ninth day, however, when the disease was declining, he was attacked with headach, sore throat, and other febrile symptoms, which were speedily followed by an eruption of the genuine small-pox, in its *confluent* form. He was immediately removed to the pest-house, where, after suffering very severe symptoms, he gradually recovered, though he is still unable to leave the house. No other member of his family, though equally exposed to infection, has taken the disease, nor have I been called in to any other case in the parish.

The following conclusions, I think, may be fairly drawn from the above cases:—

First, that recent vaccination affords a more certain security against small-pox than that performed at a distant period; and hence is derivable an argument in favour of re-vaccination.

Secondly, that in those cases in which vaccination does not afford perfect immunity from small-pox, it has the effect of greatly modifying the symptoms and character of the disease.

Thirdly, that if vaccination be performed after the individual has been subjected to the influence of contagion, it has no power of preventing, or even modifying, the small-pox, which clearly points out the great yet common error, of waiting for the appearance of the disease in the neighbourhood, before having recourse to the protecting powers of vaccination. I have the honour to be, Sir, your obedient servant,

C. R. Bree, M.R.C.S.

Stowmarket, June, 1837.

GLANDERS.

Glanders, the nature of which is yet a problem, is it contagious? Huzard says, "yes," with Solleysel, La Guirinie, and Gaspard Saunier. Camper, Godine, Magendie, Dupuy, say, "no." La Fosse says, "yes" and "no." Coleman, Delabere Blaine, and Dutz, neither say yes nor no! Chabert, after having, during his whole life, maintained the contagiousness of glanders, has retracted this opinion in his old age.

Last of all comes M. Galy, the great partisan of non-contagion, and the inventor of a new mode of treatment. He proposed to the minister of war the institution of certain experiments, which was accepted. Certain horses labouring under glanders were mixed with others, perfectly sound, on the farm of M. Gelinier. The experiment was so far successful that, on the proposition of M. de Champagne, inspector-general of the studs, it became a question to reconsider the ordinance of the 16th of July, 1784, which required the destruction of all glandered horses.

M. Dreux, proprietor of the park in which this farm was situated, saw, as he thought, in these experiments, an infraction of the conditions on which he let the farm. The question was brought before the first chamber of the Court Royale, which decided that a farmer cannot bring on his grounds any horses labouring under glanders, in order that they may be submitted to treatment, without a breach of the terms of his lease, and without the security of a good housekeeper that recompense shall be made for the mischief that may be done.—*Veterinarian., Aug., from Le Droit.*

FRACTURE, DISLOCATION,

AND

SEPARATION FROM THE ULNA, OF THE RADIUS.

To the Editor of The Lancet.

Sir:—The maid servant of Mr. C., residing in Westmoreland-place, City-road, obtained permission from her mistress to go out for the day, and while coming down stairs, after dressing herself for the holiday, slipped, and fell backward. In the attempt to save herself, she carried her hand behind her, the back of which, the hand being doubled upon the wrist, first came in contact with the boards. By this means the head of the radius was fractured, and partially dislocated, and the ulna so completely loosened from its connections with the radius and interarticular cartilage, as to be moveable in all directions. Under these circumstances I was requested to see her, twenty minutes after the occurrence took place, and, having adjusted the parts with as much precision as possible, there being a good deal of tumefaction, I enveloped the forearm in a bandage from the wrist to the elbow. Splints were then applied, and the bandage kept constantly wet with a lotion, consisting of acetate of lead, and camphor mixture. By this simple treatment, the arm rapidly mended, and at the expiration of three weeks, when the splints were removed, was as well as could be expected.

My reason for troubling you with this communication is, because I belive the accident to be one of rare occurrence. I have the honour to remain, Sir, your obedient humble servant, R. Davis.

1, City-road, Finsbury-square,
July 31, 1837.

Fœtal Respiraation.—P. S. Although it may be out of place here, perhaps you will allow me to make a few observations upon my case of vaginal respiration, which you had the goodness to publish in The Lancet of the 18th of last March; and also upon the strictures made on that case, by Mr. Stevens, of Kennington, which appeared in a subsequent number.

I then stated that during the time that the child's head was retained in the vagina, and while my left hand supported the thorax, I distinctly felt the ribs being elevated and depressed, demonstrating that respiration was taking place, but, at the same time, I observed that the case was gratuitous, as there was no post-mortem examination allowed. Now what says Mr. Stevens? After heading his communication, "Supposed Vaginal Respiration," and quoting a few sentences from Haller, and then affirming, that my sensations were imaginary, (imagination in the fingers!) he expresses himself thus:—"From a case which once came under my observation, and from the arguments which suggested themselves to me at the time, I am not satisfied with the conclusion of Mr. Davis, for the head had compressed the cord against the pelvis of the mother, and the fœtal circulation being obstructed, the independent circulation commenced, or attempted to do so." What does this paragraph prove? That Mr. Stevens must have forgotten the subject upon which he was writing, if he puts it forward as a refutation of the point at issue. I affirm that it supplies a direct proof, and perfect corroboration of my statement, because respiration must take place at the same time as, or previous to, the commencement of independent circulation.

R. D.

THE BLOOD DURING SYNCOPE. ACTION OF MERCURY.

To the Editor of The Lancet.

Sir:—The subject of the following remarks was referred to me by a learned non-medical man. My answer was that which I now append, but without the physiological inferences. The learned gentleman is not satisfied. Perhaps some of your ingenious readers can give him a more satisfactory explanation. I have not seen Hunter's observation in print, but I believe that it occurs in his work on the blood. I am, Sir, your obedient servant,

Robt. Stevens.

Kensington-road, July 30, 1837.

Hunter observed, that when syncope occurs during phlebotomy, arterial blood flows from the vein (if blood flow at all). This phenomenon he could not account for, but he knew that it involved important physiological principles. I am not aware that any modern physiologolist has adverted to the matter. Had Hunter possessed the collateral advantage of the science of chemistry as it now exists, he would have accounted for this peculiarity, which did not escape his observation. I need not enter into the question, What is the nervous influence, or the principle of life, which governs the changes in animal bodies, though I believe it to be analogous to that principle which governs the changes in the other forms of matter. It not only carries on the circulation, but it also causes those changes which are the object of the circulation, viz., the deposit of nourishment, the secretions, and all subtractions and additions which convert arterial blood into venous. During syncope the nervous influence is depressed, and not enabled to produce those elementary changes which cause the difference between arterial and venous blood, although, from the peculiar manner in which the active centre of the circulation is supplied with nerves, it may feebly carry on the circulation, which act is subsequent to the above end, and must be performed first; but through the state of nervous depression the end is not effected; the circulation is carried on by the heart, merely as an hydraulic machine; the arterial blood returns by the veins, unaltered,—arterial blood, still. For if nutrition, secretion, absorption, &c., were not produced by another effort of the nervous influence, the arterial blood would return changed, these effects being produced, which is not the case.

I believe, therefore, that before nutrition can take place, decomposition of the nutritious matter contained in the arterial blood must be effected, and a distribution of the elements in the required forms. Decomposition must certainly be effected before absorption takes place; that is, cellular tissue and bone are not absorbed as cellular tissue and bone, but their elements, or new forms. And on this principle we have a more rational theory of the *modus operandi* of mercury, in syphilis, and in cutaneous diseases, which depend upon a specific virus. It increases the action of the absorbents, and so promotes decomposition, and, without purging it from the system, as generally conceived, forms innocuous compounds of the elements of the poisonous secretion. For we observe that in proportion as this latter is within the pale of action of the absorbents,

so is the disease which it constitutes more likely to terminate *sua sponte*. Take as an example gonorrhœa, as opposed to syphilis; and if small-pox be cited as an objection, the small-pox pustule dies, and there occurs a line of demarcation between it and the parts imbued with vitality, which may account, *in part*, for this virus not being able to continue its own species in the same individual, even for a time, as in syphilis. Though, perhaps, it may be said, that the time of susceptibility is gone by, for we are not always susceptible of small-pox, even before its occurrence. Of what this susceptibility consists, is another question. Yet we are more susceptible of it before its occurrence than afterwards. This is a fact which no scientific or logical inference could have led a man to pre-suppose. We can reason no farther; we must take nature as we find her. It is an appointment of intelligence which we cannot understand. It serves a benevolent purpose, like all other natural laws.

REMEDIES FOR PRUSSIC ACID.

To the Editor of THE LANCET.

SIR:—A paragraph appeared in the "Monmouthshire Merlin" of this week, under the head of "Effects of Prussic Acid upon a Rabbit," wherein it appears that a Dr. Robinson, of London, having tried three drops of the above-named acid upon a rabbit, the animal immediately exhibited the usual symptoms of poisoning therewith,—increased action of the lungs, dilatation of the pupils, and the peculiar shrill cry which in such cases is generally indicative of immediately approaching dissolution. It is then said that, "in order to give it a chance of recovery, a few drops of ammonia were administered, without apparent benefit." Now, if we bear in mind that ammonia, when taken *internally*, combines with the acid, forming a cyanide of ammonia, which is equally poisonous, we can scarcely wonder at the result. The only way in which ammonia can be of service is by inhalation, so as to endeavour to counteract, by its irritating quality, the very great tendency which there is to collapse. The cold douche, or shower-bath, acts in like manner, by its shock upon the nervous system, as illustrated in the case of the rabbit above quoted, which the experimenter concludes by stating that in "no instance had he seen an animal restored, after presenting the symptoms which this rabbit exhibited." A weak stream of galvanism, if passed along the course of the cerebellum and medulla spinalis, would act in like manner. But these are adjuvants. Now, the proper remedy, if at hand, is *chlorine* (of which no mention is made), for I can, from personal experience, state it to be the best remedy which we possess, seeing that a solution, when poured down the throat, by means of a tube (care being taken that none gets into the trachea), is sure to recover the person, *even after he has fallen down, labouring completely under the morbific influence of the poison*. I am, Sir, your obedient servant,

JAMES RATTON, Surgeon.

Coleford, Gloucestershire,
July 26, 1837.

CURE OF GOUT.

To the Editor of THE LANCET.

SIR:—A number of THE LANCET, a short time since, contained a letter, in which a correspondent strongly recommended the use of tobacco in gout, and other very painful and deeply-seated affections. Allow me to acquaint your numerous readers with a practice which I have found very successful after the usual remedies have failed. In severe cases it soon eases the excruciating pain, and torture is shortly succeeded by repose. I have only tried it in cases of gout in the extremities. The treatment is this:—Bathe the part in hot water for one minute, and then apply lint, spread with simple cerate, on which is spread about three grains of the acetate of morphia. The change which speedily takes place is surprising. The patient, from extreme agony, at once passes to a state of comfort.

I have the honour to be, Sir, your obedient servant,

A SUBSCRIBER.

IODINE IN FARCY AND GLANDERS.

MR. YOUATT has made the following remarks in the *Veterinarian* for the present month (August) on occasion of extracting into that Journal from THE LANCET (p. 580), the paper of Mr. Thompson, of Whitehaven, "On Iodine as a Remedy for Glanders." After thanking the author for the publication of his paper, Mr. Youatt says:—

"Some few experiments have been made on the power of iodine over glanders and farcy, but they have not been instituted on any systematic plan, nor followed up with zeal.

"Mr. Percivall was early in the field. He had a horse in his infirmary (in the spring of 1833) evidently farsied. A chorded chain of connection could be felt between certain pustules that had appeared upon him. Nearly six weeks from the first appearance of the farcy, traces of glanders, which could not be mistaken, appeared in the right nostril, and he was put under the influence of iodine. Three grains of the mineral

were given morning and evening. Two days afterwards, the dose was increased to five grains twice in the day; and, at the expiration of a fortnight, each dose had been increased to half a scruple. This plan of treatment was pursued two months; but the disease progressed from bad to worse, until all hopes of benefit derivable from the iodine having totally vanished, the patient was destroyed.

"A little earlier in the same spring, he had a horse with pure farcy. The patient had calomel and aloes, and diuretic medicine daily; mercurial friction was employed, and, still later, the power of the sulphate of copper was tried; but the horse got worse and worse. Two months now nearly had passed, when Mr. Percivall determined to try the effect of the iodine. He began with five grains daily; the disease appeared to be rapidly gaining ground, and a week after the commencement of the iodine, the dose was increased to ten grains daily. Still the malady was evidently progressing; the dose was then rapidly increased to a scruple. The horse began evidently to amend, and in three weeks from the commencement of the full dose, and six from the first exhibition of the iodine, and thirteen from the appearance of the disease, the farcied swelling had subsided, the sores had quite healed, and the horse was sent to work. Mr. Percivall very candidly adds, 'the green diet' (for he was turned into a small field when he began to take the iodine) 'might have much contributed to the cure.' It might so, but the chief praise is evidently due to the iodine.

"There is nothing contradictory in these two cases. Farcy, which is occasionally under the control of several of our medicines, yielded to the influence of the iodine, and after it had set at defiance the power of other means and appliances. Glanders, which seems to laugh to scorn the efforts of the veterinarian, resisted the supposed power of this new medicament.

"In the autumn of the preceding year, Mr. Simpson, then of Southampton, had a patient with the left submaxillary gland swollen to the size of an egg, hard, and perfectly adherent to the bone, with occasional discharge of pus from the left nostril. This was a very suspicious case; but he could not bring himself to believe that it was one of glanders, for the discharge was occasional and irregular, and not the slightest ulcer could be discovered in the nostril. He had been a pupil of mine, and afterwards a resident in my house, and we had both experienced the power of iodine over glandular swellings. He determined to put it to the test here. An embrocation composed of tincture of iodine, with compound soap liniment, was well rubbed into the tumour two or three times a day, and six grains of iodine given morning and night. This treatment was pursued more than a week, but the discharge continued, and the gland had considerably increased in size. Still, not believing that it was a case of glanders, he applied a strong blister to the tumour, and repeated it three days afterwards. Fluctuation was then evident: he punctured the tumour, and about eight ounces of purulent matter escaped. A poultice was applied for a few days; the discharge from the nose gradually ceased; the tumour quite disappered, and the animal went to work.

"This case, to a certain degree, bears on the point at issue. It says nothing with regard to glanders, but it proves, at least in the short space of time during which it was used, that iodine has no effect in diminishing enlargement of the submaxillary glands. At the same time, under the treatment of Mr. May, of Malden, another and a highly valued pupil, the parotid glands in a horse, that had become enlarged to such an extent as to render tracheotomy absolutely necessary, daily and plentiful embrocation, with the same compound of iodine and soap liniment, perfectly reduced the swelling.

"In the following year, my friend, Mr. Karkeek, throws fresh light on the subject. He had a patient with chronic enlargement of the maxillary and parotid glands. The disease had existed during two months, and the tumours were hard and scirrhous. Setons, strong mercurial ointment, and blisters, had aggravated the evil. He had recourse to iodine. He gave it internally in doses of five grains daily, and he ordered the iodine ointment to be well rubbed in. This was continued during three weeks, the iodine being increased to ten grains daily, but without the slightest effect. The liniment used by Messrs. Simpson and May was then had recourse to, and the horse was turned to grass, but the glands remained as large and as hard as ever.

"Mr. Karkeek, determined not to be baffled, had recourse to another form of iodine, the hydriodate of potash, both in the form of ointment and of ball. The ointment was made of its full strength, being in the proportion of a drachm and a half of the hydriodate to an ounce of lard, and the balls contained at first two grains, which were rapidly augmented to twelve. Both were used twice in the day. In a fortnight the glands had begun to soften, and, before the expiration of a month, they were reduced to their natural size.

"In our next number we will inquire into the experience of our continental brethren on the effect of iodine in glanders and farcy; and, in the mean time, we entreat our friends in every part of the kingdom to favour us with the result of their experiments."

THE LANCET.

London, Saturday, August 5, 1837.

When the mind suffers under the influence of some powerful existing evil, it often happens that a restlessness of disposition is excited thereby, without enabling the sufferer to resolve on any rational or determinate means of *relief*. The *anxiety* to obtain redress brings with it no available instrument as a remedy. The mental faculties, under a sense of wrong-doing, often become so disturbed, the resources of the intellect are so harassed and weakened, that *reason*, the only sure foundation of hope and confidence under such circumstances, is, unhappily, altogether wanting, although it is then most required. Amongst the *brute* creation, danger often brings with it an *aid* in the powerful and varying appliances of instinct. But when *that* resource fails, all becomes confusion; the creature has no store whereupon to draw for relief, and no directing power of intellect enables it to form combinations for the purposes of escape, protection, or defence.

Surrounded as is man by the artificial arrangements of society, instinct avails *him* but little in the educational habits of life, and we are compelled to remark, from what we notice of events which are daily occurring, that hundreds and thousands of the human species are benefitted nearly as little by all the resources of intellect and judgment, as by the impulses of instinct. In devising the means of escape from difficulty, in suggesting the modes of relieving themselves from grievous wrongs, in attempting to extend their efforts of relief, towards determinate objects and results, large masses of educated men are found to play so childish and imbecile a part,—become the voluntary authors of such frantic and silly antics,—as might induce us to believe that study had become a process of pain without profit, and that the memory might at once be usefully relieved from sustaining on its tablet a single impression of the recorded events of centuries.

In committing our thoughts to paper on this occasion, we disclaim every intention of entering on what has been but too aptly termed the field of "party politics." The pages of a work in which science is the general subject of discussion, are not fitting vehicles for diffusing throughout this empire, in the peaceful abodes of practitioners in medicine, the rancorous and violent tones of political strife. But, strange to say, the distinctions which are always understood to exist in relation to the general politics of the country, lose their application, and create the utmost confusion as to inferences, when applied *specially*, and on *medical* grounds, to the affairs of our profession. Often does it happen that the "Tory," or "Conservative," on all questions of *national* or *general* politics, is a "Radical" on every subject connected with *medical* government; and that, in equally numerous instances, on the other hand, exactly the reverse of this mutation is the fact. These variations of opinion are certainly referable to the special and obvious circumstances which operate upon the minds of the individuals who become the subjects of them. The strong desire which is manifested by the thoroughgoing "Conservative," to maintain all our institutions in exactly the same condition as when they were transmitted to us by our forefathers, shifts, readily enough, into a generous and praise-worthy inclination to remedy the *particular* abuses which everywhere exist in the various Colleges of Physicians and Surgeons, and other *medical* establishments. The "Conservative," in *such* a case, yields to a just sense of *right*, and a proper regard for personal profit and convenience. Thus the "Conservative," in *general* politics, becomes at once a "Radical" in *medical* politics, and cheerfully and vigorously raises his arm, in conjunction with his brother Reformer, for the purpose of driving the axe home to the very master-root of the cankered tree.

In this combination of thought and object there is no sacrifice of *principle*. On special cases of acknowledged abuses,—abuses which are actually *felt* to be grievous annoyances,—there is no sacrifice of *principle;* but, on the contrary, an indication of liberality and high-mindedness, which induces persons who belong to two opposite and violently-contending parties, to combine, for their common advantage, and the public weal, on one clearly-defined subject of reform.

But what are we to say of the men of *no-principle*, who have just perception sufficient to see that things are *wrong*, but who, knowing not how to set them right, or, knowing the quality, as well as the extent, of certain effectual modes of relief, are devoid of courage to prescribe the radical curatives, and shrink most from an avowal of the remedy at the very time when a sense of honour, of utility, and of public duty, would seem to demand that the curatives should be distinctly and unequivocally enunciated? What, we ask, is to be said of *these* men, who, readily acknowledging that they are severely burdened, still sustain the load, trudging along their filthy way, crying and howling, chafed and tortured, having neither the resolution to throw off the ignominious yoke, nor the sagacity or the honesty to tell their brother slaves in what manner their emancipation could be most speedily and triumphantly secured? What, we ask, are we to say of such men as *these?* And the question is proposed just as we have concluded reading the report of the proceedings at the fifth anniversary meeting of the PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION, which has been published as a Supplement to *Berrow's Worcester Journal* of July 27. If the answer recorded the truth, only one reply could be given to this question.

The report in the supplemental sheet now before us, has evidently been varnished by touches from the hand of some official personage. The entire document exhibits, in every paragraph, the stamp of official authority. But what does the report contain? Nothing but a series of laudations, complimentary elegancies, gasconades, and fanfaronados. Substantially, not one paragraph, not one sentence, not one opinion, not one sentiment, relative to the fundamental principles of a sound system of medical government. There is not to be found therein one suggestion as to the mode which ought to be adopted for bringing those principles into active operation. When the Provincial Medical Association was first projected, it was brought into notice and rendered popular by the efforts of this Journal. At that time, and afterwards, an acknowledgment was freely made, by the leading men of the Society, of the benefits which THE LANCET had conferred upon the undertaking. Although the thanks of the members were not ungratefully received by us, no acknowledgement of the kind from the parties in question, was solicited, or expected. We required not even the slight reward of *thanks* for faithfully discharging our duty to the profession. The proceedings of the Society were reported by us with cheerfulness, and we hailed the proposal for organizing the members of our profession into a compact and nicely-adjusted association, with feelings of unqualified satisfaction. The thing was wanted; necessity had demanded its existence; medical interests had been every where neglected, except by the medical press. In not a single College did there exist a just system of medical government. In short, from the conflicting interests which then, and had long previously, existed, the affairs of the profession were in a state of chaotic disorder. The defects of all the established systems having been proved by indisputable evidence, the impolicy and narrow-minded construction of the Acts and Charters which have been dignified by the title of "MEDICAL LAW," having been elucidated to the perfect satisfaction of every mind which was capable of distinguishing between right and wrong,—between correct principles of government, and the most

knavish practices of peculation,—the materials for producing a better state of things were before us, and we thought,—rashly enough, it seems,—that the profession were about to labour in their own vineyard, and, for the first time, to taste the fruits of their own honest, zealous, and intellectual exertions. Not a man in the profession—not even Dr. HASTINGS, the author of the project, himself,—viewed the first rise and progress of this Association with feelings of greater joy than ourselves. Alas! we were woefully deceived, and both bitter and full is the measure of our disappointment. As connected with all great objects,—as connected with those essential ends for which the Society was supposed by us, and by others, to be instituted,—namely, that of regenerating our profession by the institution of a just and liberal system of government, which should be applicable to the well-being of practitioners in all parts of the empire,—the Association has proved to be a miserable, a most disgraceful ABORTION. Aye, *disgraceful*. The word may have a disagreeable sound, it may be of a harsh import; but never was the term more justly applicable than in characterising the proceedings of this exposed, mock-liberal Association.

The leading dubs of the clique will wince and writhe under this denunciation, which, in fact, is wrung from us by a painful sense of duty on this occasion. The CONOLLYS of the party, and others of that stamp, will declare that THE LANCET is "violent," "abusive," "slanderous," on the subject of the Association. Be these their words. *Falsehood* is not an efficient substitute for *argument*. The task of *slandering* shall be their own; but we would good-temperedly entreat of them to find time to answer one short and simple question:—WHAT HAVE BEEN THE LABOURS OF THE ASSOCIATION, DURING THE FIVE YEARS OF ITS EXISTENCE, ON THE SUBJECT OF MEDICAL REFORM?

This question admits not of an evasive reply. It is one which relates to *facts*,—to the records of *history*. The Association has just held its fifth anniversary meeting, and we again ask, WHAT HAVE BEEN THE LABOURS OF THE ASSOCIATION, DURING THE FIVE YEARS OF ITS EXISTENCE, ON THE SUBJECT OF MEDICAL REFORM? Several of the speakers, in their insane after-dinner addresses, spoke of the "great *objects*" of the Association; and Dr. HASTINGS, in allusion to those "great objects," was quite grandiloquent. Does one of the objects consist in toasting at the annual festivals, of the LONDON COLLEGE OF PHYSICIANS, the LONDON COLLEGE OF SURGEONS, the LONDON COMPANY OF APOTHECARIES? Most probably; the self-perpetuating monopolies having been toasted at the Cheltenham dinner. And this is a NATIONAL MEDICAL ASSOCIATION, is it,—consisting of men whose interests, one and all, have been either grossly neglected, or destructively assailed, by the three vile Corporations which the wine-bibbers were guilty of the superlative meanness and unsurpassable baseness of TOASTING, and COMPLIMENTING, over ample libations of Burgundy and Port! Heartily glad are we, on witnessing the purposes to which these annual meetings are devoted, that the whole affair has become a failure and a farce,—a failure in respectability, a failure in talent, a failure in numbers. In *numbers*,—for out of upwards of FIFTEEN THOUSAND medical practitioners resident in England and Wales, this "*National* Association" mustered at the dinner to the extent, *possibly*, of 130 members. The surgeons in general practice throughout the kingdom, have become acquainted with the character of the Association, and their determined avoidance of all connection with the imposture, is the natural consequence. Oh, the DUBS, the self-interested, mischief-plotting DUBS, they are ridiculously discomfited!

On another occasion we will extract sufficient matter from the official Report in the *Worcester Journal* to stamp the character of the chief actors in this Association, in the minds of all the enlightened members of the profession. We pledge ourselves to remove

every doubt that may still exist on this subject. When we noticed the proceedings of the meeting held at Manchester in the last year, we felt strongly inclined to believe that *vanity* was the prevailing attribute of the principle performers on that occasion; but it is now quite clear to us that something worse than vanity moves the ruling powers of this pernicious and expiring Association. The Report before us contains evidence of narrow-mindedness, envy, and bigotry, which would have been better suited to events in the *sixteenth* than the *nineteenth* century. We write on this subject more in sorrow than in anger, because we deplore the failure of the Association. We expected great results from the combined operation of the profession; but, alas! there is no powerful *combination*, because the Society exhibits no unity of design for great and high-principled purposes.

The members of the profession instinctively shrink from belonging to an Association in which a majority of them would annually be required to enact the humble part of PUPPETS to some dozen or fifteen individuals who have no other claims to distinction than the possession of an empty title, which was as *ingloriously* acquired as, it is *unworthily* used,—used as a means of satisfying a really low-minded ambition.

Before we again take up the pen to discuss this subject, let us express a hope that Dr. HASTINGS, or one of the CONOLLY tribe will display enough of candour and of courage to answer the question which we have already propounded, namely,—WHAT HAVE BEEN THE LABOURS OF THE ASSOCIATION, DURING THE FIVE YEARS OF ITS EXISTENCE, ON THE SUBJECT OF MEDICAL REFORM? And, further, we entreat of them, boldly, and without equivocation, to state WHAT ARE THE VAUNTED "GREAT AND NOBLE OBJECTS" OF WHICH THE ASSOCIATION IS IN PURSUIT? Is there any difficulty, either in answering the question, or in making the required statement? No; there is none,—that is, if the proceedings of the leading actors be not concealed by a veil of hypocrisy, or if there exist any desire on their part to speak neither more nor less than THE PLAIN AND NAKED TRUTH.

The Student's Pocket Guide to the College of Surgeons, &c. By FORBES WINSLOW, M.R.C.S.L., 1837.

THE temptation to possess a "Guide to the College of Surgeons" for the waistcoat-pocket, is, probably, sufficient to induce many unfortunate students to become purchasers of this illiterate and ignorantly compiled production. No one ground of recommendation besides does it possess; for, of all the abortions that were ever cast into the world, this "Pocket *Guide*" is, perhaps, the most immature and abnormal. In an attempt to make some sort of classification of its contents, we may distinguish it into two parts,—one the *scientific*, the other the *literary*. In the former, almost every line contains some error in surgery or anatomy; while the latter is disfigured by the most extraordinary admixture of bad English and detestable Latin that was ever perpetrated by an ill-instructed person. The first sentence in this "Guide to the College," will serve as a specimen. "The science anatomy," says the writer, "is divided into osteology, the bones; syndesmology, the ligaments; bursalogy, the bursæ mucosæ, &c." Further on (p. 5), we are gravely informed, that there are only two arteries in the human body, the aorta and the pulmonary, for the sapient reason, that all the other arteries are only *branches*. How Sir Astley Cooper would stare, if one of Mr. Winslow's juvenile readers were to answer, in reply to the common question, "What are the arteries of the forearm?" "There are *no arteries* in the forearm; the aorta and the pulmonary are the only arteries in the body." Take a sample of Mr. Winslow's surgery and physiology (p. 8):—

"How do you distinguish arteries from veins?—The coats of an artery are denser, whiter, and elastic. Their apertures *gape* in the living body, and pulsate."

Think of the arteries in the living body having apertures, and gaping! We suppose the writer means, that, when an artery is divided in the living body, the section of the vessel thus made, continues open. The idea conveyed in the passage cited, is quite of a different kind.

One question (p. 10) seems to be so apocryphal, that we must give it in full. "What separates the two *organs* of the levator labii superioris oliqui nasi?—the angular vein and artery." Where did the worthy bearer of the name of the great Winslow learn this singular fact; or how learned he, that the arteries (p. 11) were very liable to suffer adhesive inflammation? An agreeable reflection for an hypocondriac to hear, some fine day, that he was "very liable" to have his aorta bunged up by *adhesive inflammation!* But we should never have done, did we attempt to correct all the errors which are contained in this book, although the author, so far sensibly, has curtailed its dimensions to a watch-pocket size. To conclude, then, with a few blunders, which will satisfy even the most lenient of critics:—

The thorax and abdomen form one great cavity in the body.—(P. 2.)

The gustatory nerve enters the angular foramen of the lower jaw.—(P. 19.)

There are four ventricles in the brain, viz., two lateral, a middle, and an inferior one.—(P. 39.)

In scirrhus of the testicle, the tumour forms beneath the *emulgent* artery.—(P. 68.)

In dislocation of the thigh into the foramen ovale, the foot is generally turned "*outwards and inwards.*"—(P. 72.) Why not *turned inside out*, which would have been twice as intelligible?

This will suffice. If the book be a "Guide to the College," it must be a guide to the back door, for by no other part will a candidate for the diploma make his exit, if he rely upon this work for instruction. If he succeed, then will we raise up our hands, and exclaim, with a melancholy sigh, "Facilis decensus Averni!"

DEATH BY FALLING FROM THE CLOUDS.

The following is an account of the post-mortem examination of the body of Mr. Robert Cocking, aged sixty-one, who fell with a suicidal machine called a *parachute*, from the cord of a balloon which ascended from Vauxhall Gardens, on the 24th of July, 1837. The height which the balloon had reached when the parachute commenced its descent, is stated to have been 5000 feet. The instrument of death was simply a canvas toy, constructed in ignorance, and used with the hardihood which might distinguish an unfortunate being who contemplated his own destruction by extraordinary and wonder-exciting means,—an end which, without the motive, was more effectually attained, by the crushing of the parachute in the air as it dropped:—

"On the right side.—The second, third, fourth, and fifth ribs broken near their junction, with their cartilages. The second, fourth, fifth, and sixth broken also near their junction with the vertebræ. The second, fourth, fifth, and sixth ribs also broken at their greatest convexity.

"On the left side.—The second, third, fourth, and sixth ribs broken near their cartilages, and also near their angles.

"The clavicle on the right side fractured at the junction of the external with the middle third.

"The second lumbar vertebra fractured through its body; the transverse processes of several of the lumbar vertebræ broken.

"Comminuted fracture and separation of the bones of the pelvis at the sacro-iliac symphyses.

"The ossa nasi fractured.

"The right ankle dislocated inwards; the astragalus and os calcis fractured.

"The viscera of the head, chest, and abdomen free from any morbid appearances.

"F. C. Finch,
"G. Macilwain,
"W. Maugham,
"T. Greenwood,
"W. Thompson, } Surgeons."

"Mr. Finch, and the other surgeons at the inquest, agreed in opinion as to the cause of the deceased's death, namely, the injuries he received in the concussion by the fall on the earth. The spinal marrow was likewise very greatly damaged. Mr. Finch also was of opinion, from the nature of some of the injuries, that the deceased had fallen on his feet. In addition to the ribs mentioned as having been broken, there was another, the eleventh rib on the left side, which by some mistake had been left out of the above paper. The hip-joint appeared not to have suffered any injury."

The Jury returned a verdict to this effect:—"We find that the deceased, Robert Cocking, came to his death casually, and by misfortune, in consequence of severe injuries received by a fall out of a parachute of his own invention and contrivance, which had been appended to a balloon; and we further find that the parachute did move to his death, and therefore that such parachute ought to become a deodand, and forfeited to the Queen."

VACCINATION IN ENGLAND.

THE Report of the National Vaccine Establishment, signed by Sir H. Halford, Sir A. Cooper, Dr. Paris, and Dr. Hue, and dated July 6, 1837, contains the following statements:—

From indolence, or thoughtlessness, many still forbear, or delay until too late, to resort to vaccination, as a preventive of small-pox, and others are still induced by disreputable practitioners to prefer inoculation, although if 300 children be *vaccinated*, one will, on an average, prove to be susceptible of small-pox afterwards, but only in a perfectly safe form; whereas if 300 be *inoculated*, one will surely *die*. Before vaccination was established, the annual deaths in London, and within the Bills of Mortality, exceeded 5000; whereas last year only 300 died from that distemper,—probably in consequence of inoculation and its contagious influence. But however much the mistaken preference for inoculation is to be regretted, it is satisfactory to know that vaccination has made considerable progress since the Report in 1836, and that the National Vaccine Establishment has supplied lymph as well to all the colonies, and many of the capitals of Europe, as to every part of this kingdom during the last year.

VACCINATION.—The Report which Sir Henry Halford and Sir Astley Cooper lately made to your Minister of the Interior (as we call the head of the Home Department of England), on the progress of vaccination in Great Britain, has, by contrast, much flattered our national vanity. In our country, inoculation, of which those excellent men so justly complain as mischievous, has long been a thing unheard of, and lymph is transmitted from the central Vaccine Office here, where hundreds of children are vaccinated every Sunday, to all parts of the empire. Indeed, unless I am greatly mistaken, inoculation is even prohibited by law. I have had my own child at the office, and been witness of the humanity and regularity of the physicians who perform this most useful duty.—*Berlin Correspondent, of Morning Chron.*, Aug. 2.

Dr. Spillan has just issued "A Manual of Percussion and Auscultation, as employed in the Diagnosis of Diseases of the Chest and Abdomen," pocket size, published by T. Jones, Aldersgate-street.

CORRESPONDENCE

BETWEEN

FRANCIS BUSH, ESQ., SURGEON,

AND

SIR HENRY HALFORD, BART.

To the Editor of THE LANCET.

SIR:—From the independence with which you have devoted a portion of your pages to expose medical abuses, and to protect the general practitioner, I am induced to solicit the insertion of the following letters in your widely-circulated periodical. I will briefly state the circumstances which led to their production.

Mrs. Theobald became indisposed, from having weaned her infant, then a few weeks old, without using any means to prevent the febrile action which sometimes takes place from that cause. Having a great desire to see her mother, she went to town, and there consulted that leviathan of physic, Sir Henry Halford. Shortly afterwards, Mr. Theobald called on me, and stated that Sir Henry Halford had told her (Mrs. Theobald) "that her constitution had not been understood, and that her case had been improperly treated; that her health had been tampered with, and that the medicines which had been used were like fuel added to fire." This statement was made before my son and partner, but is repeated, in substance, in Mr. Theobald's letter, dated May the 1st. This induced me to write to the Baronet, and led to the correspondence. Since my last letter to that gentleman, which was dated the 24th of May, I have waited for a reply, but have received none. I have given him every reasonable opportunity to obtain from the Theobalds the explanation which I require, but having failed to do this (as Mr. Theobald, in a letter dated June the 10th, says, "no correspondence has taken place between Sir Henry Halford and any of my family to clear up the affair"), I feel compelled to submit it to the judgment of an enlightened medical public. Had Sir Henry Halford held what his party is said, insultingly, to term a "subordinate" situation in the profession, I might not have been induced to notice his conduct, but, placed as he is, at the head of it, I feel it my duty to publish the correspondence. This, however, I do most reluctantly—reluctantly, because the world is too apt to exclaim, "ex uno disce omnes." But I rest fully assured that the communication will serve as "a great moral lesson" to such as may be disposed to treat lightly the professional characters of others. I remain, Sir, your obedient servant,

FRANCIS BUSH.

Frome, July 24th, 1837.

No. 1.—*Mr. Bush to Sir H. Halford.*

"Frome, April 27th, 1837.

"SIR:—I have to complain of a most serious injury which you have done me. I have been informed that, amongst other defamatory observations made, when speaking of Mrs. Theobald's case, you said that I had misunderstood her constitution, and treated it improperly. Such slander, if uttered, was both unwarrantable and unprofessional, and calculated to injure me in my practice. As the head of the medical profession, you must be sensible of the value of medical character, and I am reluctant to believe it possible that you could thus defame a man whose professional reputation has been established, in the place in which he now resides, for the last forty years,—a man of whom you know nothing. On this subject, some explanation is due to me, and some explanation is due from you, Sir, both in your character of physician and gentleman. Sir, I am, &c.,

"FRANCIS BUSH.

"To Sir Henry Halford, Bart., &c."

No. 2.—*Sir H. Halford to Mr. Bush.*

"Curzon-street, April 28, 1837.

"SIR:—I declare upon my honour that I never made a defamatory observation (your own word) on the conduct of a professional person who had advised Mrs. Theobald previously to my seeing her; nor did the circumstances of the case call for any remark on the treatment to which she had been subjected. After this solemn declaration, I hope it will occur to your sense of decency and good manners, to regret that you have made so offensive an attack upon me, who have lived forty-three years in the good opinion of the profession, and which would not have been possible, had I, in a single instance, perhaps, in my life attempted to acquire reputation by undervaluing, much less reproaching, the conduct of other medical men with whom I may have been brought into consultation. I repeat my declaration that I never used a word in reflection upon the conduct of any person who had attended upon Mrs. Theobald, and will live under a conviction, that you must feel deep regret at having made so coarse an attack upon me, before you had taken some steps to ascertain the truth of your charges by asking me the question. Sir, I am,

"HENRY HALFORD.

"To Mr. Bush, Surgeon, &c., Frome."

No. 3.—*Mr. Bush to Sir H. Halford.*

"Frome, April 29, 1837.

"SIR:—I beg you to accept my apology for having addressed you in language that would be considered coarse or rude, and to assure you that your letter satifies me that the representation made to me, which called forth my letter, was a fiction. However, I will inform you where I obtained it. Mr. Theobald called on me, and informed me that Sir Henry Halford had told Mrs. Theobald that her medical adviser, not understanding her constitution, had tampered with her health, and had given to her medicines which were adding fuel to fire. That *her case* demanded great *care and skill*, and that Sir Henry had, therefore, advised that another practitioner, whom he named to her, should be consulted when in the country, and that he, Sir Henry, would be happy to confer with him on Mrs. Theobald's case at any time. Sir, I am, &c.,

"FRANCIS BUSH.

"To Sir Henry Halford, &c."

No. 4.—*The Rev. Mr. Theobald to Mr. Bush.*

"Nunney, May 1st, 1837.

SIR:—I beg to assure you that Sir Henry Halford introduced the expressions the first time he visited Mrs. Theobald on her reaching London; and they were used in the presence of her mother and sister. If you entertain any doubt about any expression which I have repeated to you, I really should feel obliged by your writing to Sir Henry Halford on the subject, feeling my conscience quite clear in every respect connected with this business. I am yours,

"T. I. THEOBALD.

"To F. Bush, Esq., Frome."

No. 5.—*Mr. Bush to Sir H. Halford.*

"Frome, May 18, 1837.

"SIR:—You have assured me, on your word of honour, that you did not defame me. Mr. Theobald's letter, a copy of which I send to you, states that you did use the language of which I complain, before three persons. This is far from being satisfactory to me, and must be explained. It remains for you and Mr. Theobald to settle this difference. As regards myself, I shall wait some few days only for the *eclaircissement*, which must be followed by an ample apology, or I will submit the correspondence to the public through THE LANCET, or instruct my solicitor to institute an action against you, and bring the parties into court to verify their statement. Sir, I am,

"FRANCIS BUSH.

"To Sir Henry Halford, &c."

No. 6.—*Sir H. Halford to Mr. Bush.*

"Curzon-street, May 20, 1837.

"SIR:—After the letter I received from you a fortnight ago, thanking me for the dignified disavowal I had given you of any reproach for mistaking Mrs. Theobald's symptoms, and mismanaging her case, in which disavowal I had assured you, on the honour of a gentleman, that I had made no injurious remarks on your conduct, and to which I might have added (as a proof of the truth of my assertion) that I really never

saw any of your prescriptions, nor knew how you had dealt with the case,—after this assurance of your satisfaction, I am surprised at receiving another letter yesterday, in which you threaten that if you do not receive an *eclaircissement* in some few days, which must be followed by an ample apology, you will submit the whole correspondence to the public through THE LANCET, or instruct your solicitor to bring an action against me; and bring the parties into court to verify their statement. Now, Sir, pray indulge, to your utmost extent, your *violence* and *impotent malice*, but remember that I will hold you PERSONALLY responsible to me for any language by which you may designate my conduct as unbecoming a physician or a gentleman. I am, your servant,

"HENRY HALFORD.

"To Mr. Bush, Surgeon, &c., Frome."

No. 7.—*Mr. Bush to Sir H. Halford.*

"Frome, May 24, 1837

"SIR:—Your letter of the 20th can only serve to fix my determination. One of two things is certain, either you have defamed me, or the Theobalds have. The story of *your* "skill" and *my* "ignorance," has spread through the village of Nunney, with a rapidity with which nothing travels but slander. I have your word of honour that you did not defame me. You have had a copy of Mr. Theobald's letter, in which he says that you did use the language imputed to you, before Mrs. Theobald, her mother, and her sister. Which am I to believe? The President of the College of Physicians, or the Rector of Nunney. The former, from his high station in society, the latter, from his sacred calling, ought alike to be incapable of traducing the character of any man; yet it is a fact that I have been defamed by one or the other. If you feel the confidence of conscious rectitude, why do you not call on the party accusing you, by implication, of unprofessional and ungentlemanly conduct, to retract the slander committed against you? Why do you not call on the Theobalds for this explanation? * * * * You mention my second letter to you, in which *you state* that I admire the manly dignity with which you repel the imputation on your character, but you forget, or affect to do so, the copy of Mr. Theobald's subsequent letter, in which he says that three witnesses can prove that you did utter the words of which I complain. You must see that no man can be more ready to make atonement for a rudeness than I am, from the tenor of that letter, yet I beg to assure you, that no man can be more determined to exact it, when calumniated or insulted. You speak "of holding me personally responsible" to you for any language by which I may designate your conduct as unbecoming a physician or a gentleman. I am incapable of such language. I would slander no man. "Pray indulge the utmost extent of your violence and impotent malice." I quote your own words; and I ask you, are they not both violent and malicious, as addressed to a gentleman, when asking reparation for an injury? You have termed my language coarse. Is yours that of polished society?

"You must obtain from the Theobalds an acknowledgment that their assertions are unfounded, or I shall hold you guilty. Sir, I am, &c.

"FRANCIS BUSH.

"To Sir Henry Halford, &c."

STOWMARKET PENNY-CLUB.

Mr. BEDINGFIELD, has forwarded to us a letter of comment, dated July 17, on the note of Mr. BREE, contained in THE LANCET of July 15, from which we extract the following statements. We would willingly publish the whole of the communication of our friend, Mr. Bedingfield, but it is our duty, on all occasions of crimination and recrimination, to prevent the extension of matter for comment by either party, to a length which exceeds what is necessary for the elucidation of the simple truth.

Mr. Bedingfield, in his present letter, says:—

"The following case will serve as an illustration of the statement, sent by me to Mr. Rumsey, some time before last Christmas, respecting the injurious tendency of the Penny Clubs. I was called in by a poor woman, in the month of November, who informed me that she had not been visited by her surgeon for a fortnight, but that he had just called upon her to say that he would not attend her any longer on the parish account, and that she must, therefore, enter his club. She replied that she had not the means, and that if he refused to attend her on the parish account, she should send for Mr. Bedingfield. This is not the only instance which I could adduce in support of my statement, that the poor are neglected in order to compel them to enter the clubs. I did not say that this poor woman was Mr. Bree's patient, though Mr. Bree applies the statement to himself. I do not furnish the name of this woman, lest it should subject her to the same *species* of cajolery and intimidation, of bribery and *corruption*, as induced Francis and his *daughter* to deny their own words, but this, as well as some

other cases, will, I trust, yet be brought before a committee of the House of Commons.

Mr. Bree thinks that he has me at a wonderful advantage, and has renewed his charge against me of inconsistency, for having myself one of the Penny Clubs, while I write against the system. I have already answered this impeachment of my consistency, in THE LANCET, No. 18, 1836 (page 563), and I ask the favour of any of my professional brethren who take an interest in what I have written on the subject of our professional grievances, to refer to that explanation, to which I now beg to add a few words more. I have pupils in whose success I cannot but feel deeply interested. I lost my parishes, which afforded me the means of instruction, in the first instance by a breach of faith on the part of my colleagues, and secondly, by *the gross misrepresentations* of the Assistant Poor Law Commissioner, Dr. Kay. My statement, in the above-named LANCET, explains how the Club was *forced* upon me. For the rest, as respects Mr. Bree's account of his and Mr. Spencer Freeman's proceedings last Christmas, a plain tale shall set him down. A messenger came from Mr. Freeman, to inform me "that Mr. Freeman would give up the Club if I would, and that he *thought* that Mr. Bree would do the same." My reply was, that I had nothing to say either to Mr. Freeman or Mr. Bree on the subject. I have not the honour of any intimacy with either of those young men, and Mr. Bree having forfeited his word in a positive engagement, it was not to be expected that I should place much confidence upon Mr. Freeman's "thoughts" of Mr. Bree's intentions; and, soon after, finding that Mr. Freeman had resigned, and that Mr. Bree had set up a club of his own, on the advanced terms of *two pence a quarter*, I deemed it expedient to continue the original Club. I became a surgeon to this Club from a necessity which is opposed to my opinions and my feelings. I continue it because I gave pledges to the parents of my pupils when I had the parishes. My attendance upon the Club patients has cost me more than treble the money which I have received, in medicine, and in the assistance which I have been obliged to render to some of the unfortunate, deserted, and starving creatures who have so employed me. I do not say this to-day, and that to-morrow, neither do I declare one thing publicly, and another privately. I *detest* the system to which I have been compelled to submit.

"Mr. Bree projected the Stowmarket Club, and he has been, *publicly*, the eulogist and defender of the system ever since. At page 187, of the second Annual Report of the Poor Law Commissioners, he lauds these humbugs to the skies. He declares, moreover, that "They have obtained, *universally*, the approbation of the more wealthy inhabitants, and that we have received the most *flattering* encouragement in the establishment of a club at Stowmarket;" and yet, notwithstanding all these flattering, golden prospects, together with the exquisite gratification which he derives from "teaching the poor to be *independent*" (I quote his own words), within six months of the establishment of this glorious concern, he does not hesitate to aver that he sent a *private* message, through Mr. Freeman, to induce me to give it up. I ask Mr. Bree, moreover, whether he did or did not, very recently, declare to a brother surgeon, at Bury (Mr. C.), "that he wished the Club at the devil?"

Medical School, Stowmarket,
July, 17, 1837.

NOVEL TREATMENT.

In the No. for May, of the Berlin Journal we find the following case of uterine hæmorrhage, arrested by compression of the abdominal aorta:—

While attending a patient in the country the author was entreated to visit a poor woman suffering under violent floodings. She had been delivered 14 days previously, and since then had, from time to time, lost a vast quantity of blood. The face and lips were pale; the hands cold; the pulse filamentous; faintings, nausea, hiccoughs, and convulsive movements succeeded each other rapidly: the patient lay in a pool of blood, which gushed in large quantities from the vagina. Being too far distant from any town to send for medicine, the author tried cold applications, but without effect; he then resolved on compressing the aorta, a manœuvre of which he had no personal experience, but which had been recommended in a medical journal which he had lately seen. The pulsations of the aorta could be felt distinctly enough a little to the left of the vertebral column; he therefore applied pressure with the ulnar side of the left hand, about two inches below the navel, at a point where the pulsation was most distinct; a gush of blood from the vagina instantly took place, and then the hæmorrhage ceased altogether. The pressure was continued with force for about half a minute, and then gradually diminished; the discharge of blood did not reappear: however, by way of precaution, a sponge, dipped in cold water, was placed in the vagina, and the patient ordered to take cooling drinks.

TREATMENT OF TINEA.

Dr. Schneider recommends strongly the following method of treatment in cases of tinea:—

A circumscribed portion of the eruption is covered with Jasser's ointment, composed of

Sulphur. purificat.;
Vitriol. alb.; aa ℥ij.
Axung. recent. ℥vj. M., ft. unguentum.

In a few days the crusts begin to split, and soon fall off; the secretions change their character, and a cure is rapidly obtained.

A mercurial purge is given every eight days, and the child takes for drink a decoction of the woods.

The mean duration of the treatment is from four to five weeks.

USE OF THE AIR-PUMP IN STRANGULATED HERNIA.

In five cases of strangulated hernia, lately treated by Dr. Reuter, he assures us that he succeeded in reducing three by means of the air-pump (*saug pumpe*) although the symptoms of strangulation were of the most unequivocal nature. In the fourth case, the exhausting pump produced little or no relief, and an operation became necessary. In the fifth case (one of crural hernia), it also became necessary to operate. This case terminated favourably, although the intestine was extremely discoloured. On opening the hernial sac a great quantity of serum was discharged from the cavity of the abdomen.—*Berlin Med. Zeit. Mai* 17, 1837.

The young gentleman who was tried about four months ago for assaulting one of the examiners at Apothecaries' Hall, and who was sentenced to find sureties for his good behaviour for five years, and to be imprisoned one year, was on Tuesday last brought up to enter into the required recognizances, her Majesty having been pleased to pardon him, as respects the remainder of his imprisonment, in consequence of some circumstances which had been represented to her Majesty. The "pardon" being produced, the defendant entered into his own recognizance in 500*l.*, and two sureties in 100*l.* each, and left the Court in freedom. The sureties were C. Hindley, Esq., M.P., and Mr. Bagshawe, of Wilton-street.—*Morning Paper.*

Lithotrity in the North.—Dr. Heurteloup having been invited by the Emperor of Russia to visit St. Petersburg, arrived there in May last, and proceeded to give public demonstrations of the lithotriptic operation on cases of stone which had been collected in the hospital for the purpose of illustration, and the Russian surgeons were thus instructed in the several stages of the process. In the middle of June, Dr. H. proceeded, by request of the Emperor, to Moscow, where thirty-four cases of stone were collected by the authorities, and where the provincial surgeons were marshalled to receive the expected tuition. The Russians are distinguished by great facility of imitation, and will prove apt scholars at copying what they may see. Sketches of such of the cases as are sufficiently interesting, are designed to appear in a future Number of this Journal.

Invalid Bed.—Mr. C. F. Kramer, an English surgeons' instrument maker, settled in Aix-la-Chapelle, and who has the best business in his department in the Prussian dominions, has recently employed an invalid bed, which is so ingeniously constructed that every surgical and domestic assistance can be afforded to the patient without producing motion or pain. The contrivance for removing the excrementitious evacuations is excellent. A correspondent, Mr. W. Gilbert, a surgeon, who has inspected this couch, assures us that it exceeds in utility anything of the kind yet devised for use during the treatment of affections of the spine, fractures of the extremities, bed-ridden patients, &c. Mr. Kramer has been in England, and brought with him a model of the bed, which has obtained great repute throughout Belgium and the Rhenish provinces.

CORRESPONDENTS.

The letter of *Mr. Langton* refers to a transaction which is likely, it seems, to come into a court of law. It will not, therefore, be proper to publish any communication on the subject until the case has been heard by a jury.

Delta's letter will be inserted. Want of space alone has excluded it hitherto.

Notice.—In the advertisement of the "Continental and British Medical Review," in the second page of the cover of The Lancet, last week, the words "No. IV." were printed instead of No. VI., which is the Part of that periodical published on the first of August.